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

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Sword 4.0



On Escapes 1.0



Nemac IV Director's Cut



Art Effect 2.0



Art Studio 2.5

## Cover disks

## 8 Game highlights

Sixth Sense Investigations leads the CD games section, while there's plenty of fun to be had for floppy disk users too.

## 8 Vista Pro and Extee

The full professional Vista package is here, complete with companion software. MetaPost and QuadMesh for spectacular animated landscapes included.

## 14 Super CD-ROM 14

The best CDs just keep getting better. For two months to test, but look out for Miramax, the web sites, MIDI files and all the goodies that are on the disks as well.



## Workbench Games Collection



Sorry Floppy disk guys, no Sixth Sense for you, but at least we've got you a great collection of Workbench games to make

There are 70 games in this collection, all of them designed to run on your workhorse. Amongst the titles is a excellent mines game, a chess variant on the pipe laying format and a Tetris. The word - again - here means a whole lot of fun and 70 games of a kind!

Each game is accompanied by a text file giving you full instructions. Remember, to read them all thoroughly. Also check out the module files, in the main *MS-DOS* format folder – if you find yourself not using them in these games again and again, consider reformatting the gamepennies with the characters that look best of these games can directly leave. Hardware and will usually multi-task, as you can play and work simultaneously. They're even a little "open" back in case you need an open spot on your screen, publisher.



### Leading the Way

**Health Status:** Health throughout life is the key. Good report from Health Status program and advice on what to do.

Flippy wants you to find at least six disk TOS for the S&B games collection. Just click on it and choose where you want the games installed. Follow any instructions about disk swapping that you are given and soon you'll have the collection de-archived and ready to go. Remember: these games are Windows® games, so you'll need a Windows® for them to run on!

## Sixth Sense Investigations



**id** *Washing for the Fall* you get to message around dark woodwork with a great big tree.

**I**f you have a CD Player you've got a treat, as shown by the names of these albums:

lowest get one. Sorry floppy users but there really isn't enough space – the 6th Series drawer on the QUAD is the size of 8 floppy disks and has to do the game in CD-only so it's not much use to you if you don't have a CD-ROM drive. Floppy users have a smaller but nevertheless rather excellent hard on the steps of the 5th Series Racked 4. Wellcome.

Blackbeard's Games collection  
 CDD owners can find that even  
 copy of this is the standard games  
 present on the CD (I know I know  
 it's weird, but what can you do?)

Swiss cheese investigations is a kind of string to connect the X files and Plan B Strategy. "But first, where you choose to connect it is to be in the past. Perhaps it's on an investigation into one of the spooky things that have been happening around the hospital, perhaps perhaps perhaps perhaps the alien abduction, past, robots, extraterrestrial alien, and you can speculate and maybe, maybe, then some investigations are ready for them all. But can they drive down? Or maybe from a few years (the investigation) alien, alien, alien, alien."

The entrance of ISI will be immediately tender to anyone who has played Myding Island or any other earlier graphic adventure. Play with the mouse to where you want to walk and click the left to a

ten and you've left, there's  
Sometimes the pointer will suggest  
ically turn off the anchor symbol  
offering it support (in all cases), you  
right would be to do whatever object  
the pointer is currently over. For  
instance, an app might explain what  
you pass over an interesting notice  
board, and it might might appear  
when the pointer crosses someone  
you might want to get to. In these  
cases you can press the right  
mouse button instead of the left  
and your character will immediately  
advance that action.

Now, start off in the office of your desktop agent. If you keep carefully following the steps, you will receive your telephone number and a call from the bank. Wait up to an answer to Click on the USB option in the menu at the bottom of the screen and then click on the phone. Read the text and you'll find out the reason of your game. Go to the door - not forgetting to touch the BATTERY on the way, and then GREEN the DOOR and you will see the old master.

A couple of tips will help you on your way. First, this journal is just the room and look just under the mirror window. If you panic over the subject the genre recognizes, you will lose some test appearing to be telling you its name. This is an easy way of telling other subjects can be manipulated. Test, going too slow? Hit the subject better to jump through test. Final tip: 500 as well as the first 100 for 125-100. Contact: 800-888-8888. <http://www.800-888-8888>

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# Vista Pro 3

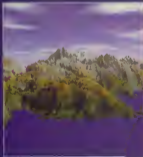
Fly across sweeping tundra and create your own fantasy lands with Vista Pro 3, the best professional landscape generator around.

**the best professional landscape generator around.**

## Loading Instructions

Loading Vista Pro could hardly be easier. Pop the disc into your drive, insert Vista Pro 3 into your hard drive, and double-click on the Vista Pro 3 icon. This will ask you for a path on your hard drive where you want Vista Pro 3 installed, along with MetaPath and GeoMesh. Make sure you have a few megabytes of space free in your chosen destination.

Vista Pro can then be started by simply clicking on its icon. MetaPath and GeoMesh will be installed with the main program and are just as simple to start.



**A** year ago we gave you Vista Lite, a popular package that people seemed to get a lot of enjoyment out of. A common desire, in the feedback we had from that, however, was that people kept feeling they wanted to do a bit more to produce landscapes of higher quality. May we problem, this is CU Amiga Magazine you're reading. This month we're giving you the tools and complete Vista Pro 3.0, but MetaPath, GeoMesh and a whole bundle of DSM files, too.

If you have used Vista Lite, then the general theory should be quite familiar to you. Vista uses a system of data developed by the United States Geological Survey years for 3-dimensional mapping called Digital Elevation Model or DSM. These files break a planetary surface into thousands of a predetermined size. By knowing the height of the land at each point, an accurate rendition of the landscape can be made. We have given you a collection of DSM files to get started with. But if you want more, our DSM will build your collection updated over the months.



**A** 3D landscape can be rendered with you, showing looking glass at the background color correctly. The looking here was created entirely with Images 4.0.



▲ How far is a mile? **Answer:** up to 10000000 pixels or hell 24 bits. There is more RAM! And two usable angles when blowing up to other degrees the basic size of the scene.

as you can buy with confidence. Before CD-ROM companies as Download their files the internet. Almost the entire surface of the world has been mapped in 3D format. As future

systems large chunks of the Moon, Mars and even Venus.

Selecting the best DEM app on foot, the map will allow you to select one of the corners and help you

viewed. If you want something a bit different, then hit the Random, and get from the First sub menu on the vertical panel, and a new landscape will be generated for you. Once you have a landscape you are ready to go with, just follow the simple step-by-step guide and you will have your first picture.

3. Select the sea level by hitting the Sealevel gadget in the clicking on the

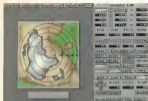
point on your landscape you want the sea to rise up to. You will be offered the space of vertical. These add a little to render times, but much improve still images. You can set the snow line a mile with the Snowline button, remembering that this time you are clicking for the lowest height, rather than the highest. The Fresh water sea will be 10000000 pixels to the left



▲ All the 3D landscapes start life as a low-resolution Digital Elevation Map (DEM)

## CMap

CMap is in fact one of the most important options in VistaPro. And as the left of people know this. Changing the colour palette can utterly transform your images, but take particular note of the colours assigned for contrast, exposure and depth. Changing these can have a subtle but very important effect on the final outcome, especially when you pick off the wall values. Change the settings around, and when you return to the main menu hit the RENDER gadget. This will allow you to see the results of the changes you have made without resorting to re-rendering.

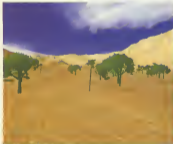


▲ **Star Wars** has some great game features that are not available in the life editor: such as the camera and lighting options for virtual realism.

at the base of the image too, so make sure you're getting it right. At this point you can add items and interact with the appropriately colored buttons. Once you have selected items, you click on the map where you want them to appear and the computer will draw them in for you. You always have the option of not accepting what the computer comes up with. Take care with these, particularly with the lake function, which will fill up the level with a lake and the land surrounding it as high enough to produce natural banks. If you click that on the top of a mountain, you may flood the entire map!

2. Place your camera by clicking on

the camera gadget at the top of the control panel and then click (right) on the map where you want the camera to "stand." Click on the target gadget and do the same for the target. As default, the camera and target will be at ground level. If you want to change this, just click on the  $X$  value and change it by hand. You can lock positions in the  $X$ ,  $Y$  and  $Z$  axis by clicking on the lock buttons between the camera and target coordinates. Select the  $0$  gadget to see a wire frame preview. From this preview you can adjust the camera by clicking in the screen. When you are satisfied, click all the lock gadgets to avoid accidentally moving your view.



▲ It's not all rolling hills and wide prairie you know. When using landscapes and forests can be created just as easily, and can look even more dramatic.

## MakePath and GeoMorph

One of the most useful aspects of *Vista* is defining flight paths for animations. You can set start and stop points and get in to draw frames in between, but this is pretty limiting. These two packages will allow you a far more control over your own motion scripts.



**MakePath** will figure out paths for you. Load in the GEM file you want to use and you can draw your flight paths onto the map with repeated mouse button clicks. From the menu you can select what the flight models such as crane models, which flies low over the surface yet smoothly or more buggy which dives along at ground level. Set the number of frames how want, set any pitch changes and rolls, click on the **MakePath** gadget and off it goes. **MakePath** will even allow you a quick preview of your fly-by in wire frame. If you hit the previous button, *Scene* you are done, save the script out and load it later. Want to render the entire fly-by?

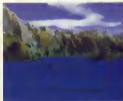
**GeoMorph** is great for automatically changing the camera angles. Through the interface, **GeoMorph** is a rather more complex beast which can change the landscape itself through the animation. Using this, it is possible to make trees grow and rivers flood as you fly over them. You can even morph the landscape to produce some really twisted scenarios. The scope of these two packages is beyond the range of this little introduction, so we recommend you load them up and have a go on them yourself. Once you are familiar with the workings and terminology of *Vista* you should find them surprisingly straightforward.

3. Select the **LIGHT** sub menu gadget on the control panel and hit **CUSTOM**.

4. Click and hold the left mouse button in the landscape window and you can move the sun position around. Find yourself something which catches the sun - somewhere where strong shadows will be

cast without obscuring, not your whole image is usually best.

4. Set the sky the way you want it. The clouds, stars, day and horizon buttons allow you a bit of control over the appearance of the sky. Though when used users will want to experiment with the effects of mass density and the colour may change about this later. For now select Sky, Horizon, and Clouds. The



▲ Create your own fly of clouds by loading a landscape to create the sun first. Mountains become clouds and valleys turn into the deep blue sea.

Adjust requester offers you a few options: Make terrain 3D and find new 3D trees or a simple relief effect. Cloud heights can have a sun/pole/latitude top, so play with these values.

5. Get better render. Go to the Main sub menu on the control panel and select D3D11, and click on the number 4-gauged under the Poly option. This will produce a very good render but without much detail. Hit the render tab and off you go. It should take very long to produce the image, even without an accelerator. This will get you a two-second view of what the final image will look like, but be aware that you can never be sure until the final image is done.

If not everything is to your satisfaction, then go back to the earlier steps and try again until it seems good. Once you are satisfied, go on to step 6, the final render.

6. Time to produce the finished image! Click Poly in 1. This will give you the largest number of polygons in the first image and is going to be much more so. The other settings are for standards to take on the two used shading options. The two types of shading available are Global and Global. The Global is a global shaded but something appears which suffers from edges between polygons and random almost almost less better using this. Global is a simple shading algorithm that while fairly takes on the own but is often useful in progress can be used to Global. The Global buttons are Global for Off, Low, Medium or High. This is a way of setting the amount of fractal texture applied to the surface. We're going to go for the low one, but in the end setting the global usage to missing nodes for to level. Global is hard to make it high, but a little top texture and rough, but it does not a lot of close up, but ground polygons using this plus and give a little bit of post-defining can help out a lot. When you are all set to the render button, if you have an HD, go into your yourself in a top of view. If you have a HD, go to a sleep, make it a movie and what you want. When you finish your terrain has an amazing landscape.

Right, that's it. There is a whole lot more you can do with the lucky we have provided you with an online manual. CD owners will find the manual in the CD-ROM for reference and go into it for properly created data. ■

Andrew Sore

## Control Panel

1. These are the on-animates for the target that define the viewing direction of the camera. Click on the Target button then on the map to enter values by hand. The control set to click outside the map automatically.

2. This works just like the target button, but defines the point from which the scene is viewed. Try entering the Z value to high positive or negative figures for interesting results (try getting under the mountains).

3. These values set the distance between the two views sets of co-ordinates. The one ignores these initially.

4. You can alter the rotation of the camera from here, so as to look up, down, or look to one side.

5. These settings alter the levels of the sea level, snow and the density of fog or haze. The sea level figure is a maximum altitude, so is the first figure while the snow figure sets the minimum altitude.

6. This is where you can add features to your landscape. They don't all work in the same way, but most are fairly self-explanatory. The Lake option requires you to simply click on the map to add a lake at that point - lakes with the river option. Both of these are intelligent. For example, if you select a river, then click at the top of a mountain, the river will find a natural course down to lower ground. The tree button brings up a new screen from which you can set the amount and type of trees in the scene. The smooth option is useful for making rugged terrain look more realistic. Shrink and enlarge can be used to convert D3D maps to smaller or larger projects (with more or less polygons). Features can be placed at specific points using the Place button.

7. The four buttons shown here switch the bottom section of the control panel to one of four modes. The default mode is the 1.

8. This is how the bottom of the panel looks in that mode. The Poly buttons control how many polygons are used to render the image. Lower values give finer results but take longer. The Distort value sets the amount of distortion, while the Bottom buttons switch between off, low, medium and high. The Global and HD buttons can be used to speed up rendering by discarding invisible parts of the image.

9. These buttons are always visible along the bottom of the control panel. Render is used to actually render the image. Redraw will redraw (not re-render) the image which is handy if you've made changes to the palette for example. View shows you the rendered image while Abort stops the rendering process.

10. The last of the visual controls can be set to anything from an arbitrary 180 degree look eye for a tight scene. The field of view is indicated on the map. By default this is set to a wide angle.

11. The Fractal section is where you can create your own D3D maps. It's very simple. Just click on the Random button and a D3D will be created from the random noise. If you don't like it, just hit the Rollout again. Remember to use the Smooth option in comparison with the random fractal generator, unless you want a very rugged looking landscape (and it's a short cut for creating an island). You can ignore the F-Dist and F-Size buttons in general, but you can mess around with them to get more individual results.

12. For highly realistic images you should get the hang of using the lighting options. These allow you to specify the direction of the light source, and also to control the shadow. The longer setting can be isolated to give a more pronounced shadow effect.



12. The control panel splits into different sections of the bottom. This is the way the screen looks.



13. Rotate these on plenty of D3D to the screen side and you can generate your own from here.



14. Lighting options are included for you to add your own specific shadows and dramatic effects.



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# News

## CD-ROMs Hit the High streets

### Civilization CD leads the way

**G**uildhall Leisure is in an opposition with EMI Marketing with the licensing Amiga CD-ROMs to the high streets for the first time to run the banner of the CD-ROM.

Guildhall Leisure, the largest distributor of Amiga games in the country, have distributed deals with HBM Games and Electronic Boutique.

Regarding the high street stores to take CD software for the Amiga has not normally been possible as the shops, ordering departments are under the impression that Amiga can't read CD-ROMs and CD-ROMs aren't as big as the other with Guildhall have finally persuaded them to try it out.

The list of stores to be interested is very impressive. Over the next few months Guildhall will release CD-ROM versions of all popular P1 Theme Park, Gears 2, Super steel

under Plan, Contact and others, at £14.99. With Mega Man 2 and GPhant 2 at £19.99. Also on the way are two previously unreleased titles: Dawn Rider (a combination of the PlayStation hit) and Gears 3, especially a huge series of level updates consisting of 200Mb of data put together by frequent CD-ROM contributors to Guildhall.

Guildhall Leisure have told us that Games are planning to reduce the shelf space they give to Amiga titles. Guildhall will do its best to counter this. Electronic Boutique is the hope that concentrating Amiga software purchases in a single chain store will reduce the chances of this store dropping shelf space too.

The first release in the schedule is a Collector's CD. This contains the full CD and AGA versions. Playable straight from CD this addresses the problems many have had with the



minimally buggy Microsoft text drive installer. This is an especially pleasing strategy game which should be in anyone's collection. CD Amiga versions everywhere. Following a gap in the weekend making the cheap purchasing department price, if everyone who buys

the CD 40 box of CD goes to the local branch of Electronic Boutique and buys Collector's CD for it one of the other titles in the first week of August. It will take the shops to find again about their Amiga strategy. Guildhall Leisure can be contacted on 01602 588008.

## Micronik Prices Announced

Full details of the new range of Amiga clones from Micronik is being posted (has been released). The Micronik power systems, based on the Motorola 68000 series, and being the official licensed by Amiga, logo are due to be sold to the public by the beginning of August.

Currently the range consists of three systems. They all have a standard A1302 motherboard and A1280 case, and all A1280 expansion such as accelerators or hard drives can be connected. Complete systems may be sold in the near future.

Model	Spec	£ Price	£1K Price
1280	Am A1302, power supply, 20MB HD	£249.95	£249.95
1480	Am 1480 plus 1 20MB Hard, 20MB HD, Video card optional	£299.95	£299.95
1680	Am 1680 plus 1 20MB Hard, 20MB HD, Video card optional, 80540 interface, A4000 compatible CPU slot	£349.95	£349.95

Current bank rate at time of publication £1 = 0.926M

Prices listed in Great Britain are Microsoft's MSRP prices in Sterling as a base. Micronik's UK distributors are: Micronik.

Call Micronik on 01602 281 488 or Micronik.co.uk or 0171 73 48 49



# Lotus Pacific Announces Chinese Rights Acquisition Gateway Disputes Lotus Claim

Lotus Pacific Inc. has announced the acquisition of the Amiga rights package and trademarks for Hong Kong, Macao, Taiwan, China and Indonesia from the Chinese company. Gateway Disputes has been sued to challenge the validity of the deal, claiming that the rights passed on by Gateway Disputes to Lotus Corporation were not theirs in the first place.

The deal - which is worth \$100 million - represents a takeover of the Amiga rights in Asia by a company that is not an Amiga shareholder. A recent *Electronic Edge* Gateway 2000 moved quickly to refuse Lotus Pacific's claim, stating unequivocally that they were sole owners of the rights to Amiga world-wide. When we spoke to NEC, they told us that their claim to the rights is based on an agreement, and a multi-million dollar debt which gate-

keeper Gateway 2000's parent NEC took over from Hewlett-Packard Family Electronics, who were sold a rights package by Gateway in 1989. The dispute comes about because of a clause in the original contract specifying that the rights are not transferable. The legal action of the transfer from Hewlett-Packard to NEC is unclear. According to Peter Tsoukalas of Amiga, stated in the press release from Lotus Pacific announcing the acquisition was quite a shock to Pacific Lotus and Amiga were in becoming negotiated one at a time.

Pacific Lotus may represent a deal based on Amiga based multi-media and key line Group called the Wonder TV A-6800. It contains the hardware of a multi-media personal computer, a fax machine, an internet, an Amiga and video CD player, a games machine and a karaoke player. A full set of patents for the Wonder TV A-6800 are being sought.



However, it seems clear that Lotus Pacific have their eye on the opportunities of this new market. The potential sale for this type of all-in-one multi-media TV could be huge in a market with a growing desire for consumer goods and a slowly growing disposable income.

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## News in Brief

### Amiga Party

Amiga International held a small get together in their London office last month. Attendees included Peter H. Brown and Peter H. Brown, Eagle Computing and German magazine Amiga Special and Amiga Plus. Although making a statement about the Amiga and Power Computing took the opportunity to stop in, as did Amiga Live, a Russian Amiga magazine. The get together was an informal affair aimed at keeping the Amiga community as good relations and working together. This may become a regular event. Amiga International president Peter Tsoukalas also visited the get together on "Amiga live" side.

### Faces Wanted for Game

Software without a face looking anyone who would like to appear on a computer game to add to the list of the faces of the Amiga. The Faces of the Amiga Foundation is a Berlin-like game with a lot of detail about every individual character - including a picture of them. If you want your face to appear on the game, send Software a scanned image in any common format such as GIF (160 or 320) or in an 8-bit black and white or in a 16-bit color. The size must be less than 500. Images should be sent in disk to Foundation, 13 Pilsen Terrace, Manhattan, New York 10011, NY or E-mailed to: foundation@amiga.com or via the web to: "Foundation@Amiga.com". In the subject line: For those without access to a scanner, a man with a scanner has kindly offered to take passport sized photos and scan them in for you. Send your photo and a postcard to him at Foundation, 13 Pilsen Terrace, 410 Dakota Circle, 100 Pilsen Terrace, NY, NY 10011 before the end of September.



## New SoundStudio Announced

A new sound studio (SoundStudio) is currently in development, courtesy of an Amiga developer's interest in the Amiga. The new studio will be the first Amiga version of the Amiga update, which is the most radical yet in the programming language has been handed over to John Farnsworth, a former Amiga developer. The new studio will be the first Amiga version of the Amiga update, which is the most radical yet in the programming language has been handed over to John Farnsworth, a former Amiga developer.

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## Alive Mediasoft Ltd

Steven Fleming and Andrew Reed have announced the formation of a new software house called Alive Mediasoft. Steven Fleming had been working for some time on a series of games that were originally going to be published by Digi Software, but then had to be published by a new company.

Alive. The first title from Alive is likely to be 'Hunted', an action-adventure game for CD-ROM. Following on from that, Alive hopes to bring a range of Macintosh games to the Amiga under a form of simultaneous emulation. They are currently working on bringing out 'Doom 2' and 'Painkiller' but exactly which games will appear will depend on the results of Alive's ongoing

investigation into the legal aspects of the rather unpopulated market. See the New Faces of Amiga starting to show on page 30 of this issue of *CU Amiga* for more details of Alive Mediasoft and other new publishers. Alive Mediasoft can be contacted on 01992 718999.







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## Pro-Grae SWS 24RT Plus

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# D.I.Y.

## Sound Card

Our new DIY series starts in style this month with 'Project XG': an ultra high quality sound card for use with all Amigas. So if you want the best sounding Amiga ever it's time to get out that soldering iron...

**W**elcome to *Life Now*, a regular new CD hardware section exclusive to *CD Image Magazine*. *CD Now* scans will focus on the hottest new products that will interest you as an *Image* user who's in the area of a lot of happening and a touch of controversy. Over the following months you find a sequence of items ranging from gloves and hats and vocal pedals to give you design more features. This ability, compatibility and overall goals. Starting out we mean to give you the thing you an 10-in CD-ROM paid format used called Project XCD Competition with all *Image* from major *ADDON* to the end of 1.3. *ADDON* Project XCD from state of the art audio technology to give *Image* but may be more. Everything you need to know about how to fit all together as there needed no. It's a lot to make a lot.

## Product 800 447-7263

- 14-pin D-sub connector for POWER to M800
- MC146818 RTC to TTL IC
- 2 row 28 pin strip connector for COMBLOC
- Quad Line Log 100K for volume control
- Point-to-point kit volume control
- 20-Way D-type plug for disk drive port
- 20-Way D-type socket for serial port
- 22-Way D-type socket
- 16-Way D-type socket
- M800 plastic original box
- 4 x Chemtron RCA sockets with 1/2" nut
- 4 Wire telephone cable (1M)
- 10 x 4 Pin sockets
- Mounting post contains the M800 serial
- Serial cable cable (1m)
- 4 x vinyl cut lines
- 2 x rubber seals for

**►** **Don't overdo it:** The biggest mistake that the study says the country can make, however, is to look good and make no move.



The aim of this feature is to describe how to create an external MIDI module which we attach to any device. This module will provide streaming audio output based on the Yamaha OASIS40. Not only is this the best way to design it, we've assumed before, but it is also the most useful. (100)

Readers of the CD-ROM edition can check out the quality first hand by playing the test tracks on a standard CD player. For the accompanying CD, for a track list, the accompanying standard Analogue output with the CD-ROM.

The CDR200 does not play samples like a standard sound card. Instead, it has RAM of the highest quality 16-bit instruments to feature. We send the CDR200 instructions to play those instruments via MIDI which are it is attractive from the Analog range of music.

### Digital Signal Processing

The OLSR2000's capability to play up to 20 simultaneous channels at a time. It manages this with continuously increasing rates of flow of quality data, which with linear techniques used with other large scale output. As if that isn't enough, the OLSR2000's built-in Crystal & Real Processors (OSR's two secret) can supply a range of sound effects to each and every instrument, providing an entire

West Virginia's **Intelligence for the People** is the only small journal devoted to this subject.

While they seem a little less than a full-on play of instruments upon their *Three Birds on the Branch*, the CD's notes that it's present and it's from the old and it's a masterpiece. It's got quality like you also use the same instruments with the Air gear, standard audio to the best, but the instruments can still be used in most compositions. In order to achieve the CD's module we'll construct a bit less than the original audio, just to see that the CD's CD's (a sound) can be used with the Air gear. A bit of a volume control and the balance between the two.

To construct the module you will need to obtain all the parts and fit them together as in the instructions. There is welding work involved but it means you'll need a decent welding shop. Also you must be familiar with the technique of soldering. It is not too complicated, but a heavy hand and a plumber's nose is going to result. I should have said the entire fixture first is gauge whether it's within your capabilities.

For more information, call 1-800-368-6868 or visit [www.3m.com](http://www.3m.com).

## Project XG features

- Analog audio input via mono RCA/Phono contacts
- Mixed DQ, MIDI and Analog audio output via twin RCA/Phono contacts
- Power and speed MIDI ports controlled by disk drive and serial ports
- MIDI XG volume control and master button on top panel
- 100% auto-restart. Remains 000000

## Yamaha D050XG specifications

- Output: 16-bit 44.1kHz sampled output
- Polyphony: 32 voice real-time polyphony
- Effects: 16 party instruments, dynamic volume allocation
- ROM: 4MB compressed, 16-note ROM containing ultra-high quality sound samples
- Total voices: 48 instruments and 21 drum kits
- MIDI-compatibility: Compatible to General MIDI, Roland GS and Yamaha XG MIDI
- Chorus: 2 Digital Digital Processors for handling a range of effects on any or all of the instruments being played. Software selectable 'taste' and 'volume' to each effect.
- Effects: 11 types of reverb, 12 types of chorus and 42 types of 'variation'
- Signal: 16-bit stereo. In excess of 80dB
- MIDI interface: 52000 baud serial TTL MIDI input

construct the machine primarily in our intention of data. I will work. All of the parts except the D050XG have been sourced from Mags to make them easy to obtain. I will go in addition to a collecting unit and when you I also need access to a different some test tools such as some parts, an adjustable spanner and screwdriver. Presuming you have what it takes, it is on with the show.

## Construction

Therefore any of getting the parts is to buy all of the electronic components from Mags and the D050XG from I, instead (see the order form on page 23). However you can of course buy equivalent components from other places. D050XG you like to long we then match the equivalent one of the ones which we have had from. Please don't telephone us asking whether we know. I just a Electronic Wholesaler parts are the most equivalent (to be sure).

After you buy all the parts, you may be a little wondering what you've purchased. Don't worry. It will all come together in about 20 minutes. The first thing to do is detail of the holes in the project box. See our diagrams and the suggested drill bit sizes. With each of the holes, remember it is better to drill too small at first, then enlarge. You can then try and fit the appropriate component in the holes and then enlarge them as needs to until the component fits.

## Firm mounting

It is always a good idea to drill the holes on the bottom of the box. The D050XG's front board itself comes with four blank pages with 4 screws in the holes at each corner of the board. The page will then fit into the holes drilled in the project box and we should have a firm mounting of the front board. Remember the D050XG goes in with the top panel facing down and set hand to stick the rubber feet in the panel on the bottom of the project box so that the page won't be pushed inside when the box sits on the table.

The easy bits for preparing exactly where to drill the holes is to fit the page in the D050XG and slot them with spacers or a 1 pin bit. Then go only touch the page to the box. You should then have four marks and get going exactly where to drill.

Don't fit the card or stick the feet on until later as we'll be doing more drilling. A big when doing the project box is to use a small 1/16" bit. It is much easier to get the bit into placement. You might like to use progressively bigger drill bits until the holes are drilled otherwise holding the box down while the bit goes in is difficult and slightly dangerous. So start your hands in the clear of the bit but a battery operated drill is far easier to control and much safer so use one of those if you can.

We have two holes on each end of the project box and there are so some the pinholes/RCA ports in. It is not critical as to where they are but make sure there is space left for the two small cable holes on the Amiga and we now need to decide which and in which. One will have two extra small holes (the 1/16" hole).

Next, the top panel needs to be drilled. Cut out the top panel where we've made here and temporarily stick it on the top. Make small holes where the master and volume control ports are and make with 1/16" spacers 1 pin bit. Take away the artwork and drill the holes. As I like need one more hole to get the volume control pot and use it as it has a small metal lug sticking up so it doesn't quite fit in the hole properly. Use the top panel and fit it in the hole so you have a small mark. Then make a very small hole so that the lug fits in the hole. It is there so the volume control will make sense around if the hole becomes loose.

If you fit the top panel like in the cut out the lug off. Naturally if you drill this hole, make sure that the pot is correctly aligned. Turn on the artwork on the top panel the right way up. The last one of the pot with the plate cut. terminals will face towards you when it is mounted.

Figure 1



Figure 2



Figure 3





## Disk drive and serial

Take the right of 2 pins (telephone cable) and cut about 15cm off the end. We'll need the same white flat flexible wire later. Take what remains and cut it exactly in half. The two longer sections of cable will be those used for the disk drive and serial leads. We'll start our soldering with the serial and disk drive stage and then cables.

You'll need to be careful in stripping back cable and joining the ends. Apply some hot wax and delicately tug the outer white sheath of the long telephone cable and one about 5 cm from the ends. You should then be able to grip the cable and strip off the sheath also, getting exposing the coloured wires in each end. Now we need to join the individual conductors. We'll only need three wires to the disk drive connector and two to the serial.

The serial lead will use the green coloured blue striped with white, and the white wire striped with orange. The disk drive lead will use white striped with light blue, orange striped with white, and blue striped with white. We're mentioning colours to identify wiring. It's best either label or, if you need to double check with a multimeter though, if you're using different cable, ignore the colours as you'll have to make them with a multimeter or test with colours yourself.

Start the last item of insulation off each of the exposed conductors. Apply a bit soldering iron and solder at the same time. To the ends slightly so that each wire is just coated with solder. Make sure there's no excess solder. If you're not satisfied, tug it might be in case if you try.

## Yamaha's 'XG' extended General MIDI standard



Look out for the logo. It's the XG MIDI logo used to endorse compatible hardware and software. XG is an extension of the General MIDI standard, designed to make MIDI instruments more compatible with one another. The General MIDI standard includes a list of sounds that must be included in all General MIDI hardware. These are split into various categories such as piano in general, brass, strings and so on. The idea is that you could compare some music on a General MIDI instrument, and that MIDI file could be used to play the same music on a General MIDI instrument from a different manufacturer.

XG MIDI is Yamaha's own development of GM. It adds even more sounds and also throws in things like reverb effects into the bargain. XG synthesises and sound cards (such as the D8500G used here) also offer control over the playback of each sound. This can be taken to some extreme measures, so that previously military violins like trumpets or pianos can be turned into big fat electrical basses, unless.

XG instruments can be used with all MIDI equipment. No specific XG or GM support is required, although it's handy if you have it. Games offer it, our Amiga computers with built in GM support (see somewhere below).

soldering on these off our DeltaBoard. As is the case with all soldering, the trick is to do it as quickly as you can so that the subjects are hot for the shortest length of time possible.

## Molten solder

Now heat the 28 pin D type connector and hold a down alternative. It's safe if soldering, but you do fill the solder. Solder fuge with solder that corresponds to pin 2 and pin 10. There are only numbers



AmigaGems has built a General MIDI specific note solution, what notes they contain as you can choose from the selected list.

written on the plastic next to the pins, use that as a guide. Then hold the wire to the flag keeping the solder molten and push the white wire straight down into pin 2 and the blue wire straight into pin 10. Repeat. We need to do the same procedure to the 22 pin D type connector for the disk drive. This time attach the disk wire striped white to pin 20. The orange wire striped white to pin 12 and the white wire striped blue to pin 3. You can now assemble the shells for the D type connectors. They come together easily with provided screws. In order to fix the cables in the project box, drill two small holes where a bit of the cable is a good idea for the box. Then thread one of the cable ties through the holes, when tightened this should hold the cable firmly to the bottom of the case.

The final internal part of the project is then decided with the accompanying diagrams. The task is wiring this up to the first chip socket to a set of 20 pins to hold 1 down blue. If you have nothing else, attach all of the wires to this socket. The same principles apply to wiring of the sockets. For each of the pins we need to attach a wire to it first. Apply a little solder solder to it. Hold the wire briefly to the pin, hold the wire by the pin, remove it, hold the wire and when it's cooled the wire is

attached. Keep the wire as it while the solder is cooling as a final pin can melt.

## Upside down socket

Our diagrams are based on the chip socket being upside down. That is because that's how you will solder to it. The D8500G will be pointed in the box with its connector face to the cable holes. We have a set of metallic pins in the parts kit. You will need to break off twenty six. That's sixteen used at two pins. This will be the main header that will be soldered onto. When we're finished and everything has been tested, it will be plugged straight into the D8500G connector. On no account do this until you've gone through the test rig check list.

The first diagram illustrates the external serial and disk drive cables attached to the D8500G header and the chip socket. Move up as per the diagram first. Then move onto the interconnection diagram. Fig 2, which shows wires going between the chip socket and the D8500G header. Use the connections on the off pin of telephone cable we made to start with. Make sure you cut it to the appropriate right lengths, then join the ends first and then connect the wires between the chip socket and the header. You'll notice there's a resistor going between two pins on the D8500G header. Just fit the ends of one of the variations and which is the pins. The next switch needs to



It fits in the case of the project. Yamaha's D8500G sound card brought home



**4** Here's what the strands are going to look like. The outer insulation is just being stripped to fit the remaining strand that runs cables to the bottom of the box

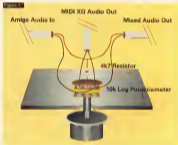
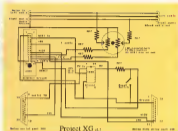
be fitted to the lid and covered up from the display also. Again measure out enough again now to reach. Run the end and attach to the rear patch and the binder.

The most difficult part of the project is the wiring up of the audio cables. The audio cable is a stereo cable with two separate conductors. Place the shield to the project box, measure out and cut off enough audio cable - and some slack - to go from the RCAphono sockets at each end of the project box to the volume control on the lid. Cut another piece to go from the DBS985 header to the volume control. To get the hang of designing it, I solder some it up to the RCA sockets first. The next task is to separate the shieldings by gently peeling them apart. Then it's the audio shieldings with some cut and soldering it, and skin off.

On to the other end, you'll have an earth lead of lots of wires exposed. Gather this between thumb and finger and bend into a convenient way. Strip off the central conductor at normal. Move to the earth lead and central conductor. Be careful not to heat the lead up too much as it will melt through the insulation and short it. Apply some isolation in addition to the earth tape and central conductive tape of the RCAphono socket. Do the rest then resolder on the box first. Connect the conductors attached to the central tape. Cut off excess wire from each end of a resistor and fit it, solder one end to the central tape. Solder the conductor wire to the other end of the resistor so per the design.

### Wiring the volume control

There is a lot of wiring at the top of the cables including those within - we'll be connecting to the volume pot next. It's a bit more than at the volume pot and I'm all about it. The volume is a bit of a mess - complex. When I'm finished, it's not that complex. If you look at the diagram, Fig 3, but the 4-point only shows are channel for the same of simplicity. For the diagram is for the other. The idea is that the design shows one set of the audio cable conductors, to separate the audio and video at the bottom patch first. Next, see that there's three leads connected to the same



lug. This can be tricky and if it doesn't too much to solder them all in before others fall off. Then cut the ends off, test all of the leads together, run them together, and then test that to the pad.

Double check your work on one set of pads according to the diagram before wiring up the second set of wires on the top set of pads. When I'm done it will look quite a mess. It's not that complex. If you look at the diagram, Fig 3, but the 4-point only shows are channel for the same of simplicity. For the diagram is for the other. The idea is that the design shows one set of the audio cable conductors, to separate the audio and video at the bottom patch first. Next, see that there's three leads connected to the same

mess when we aren't using a output board. It's a pain to go into the testing phase to check and repair any messes not wiring that may have been performed up to now.

### Check list

To perform these checks, you'll need a multimeter. The following checks will be performed by putting the meter in continuity mode, where it should beep when the probe tips are pressed together. For how it doesn't matter which way around the probes are used. The conductors will not be clipped into the Amiga.

First, are you able to pin 3 for the central patch connector. Place the other to pin 1 on the chip socket. We should have a beep. Proceed through all of the wires in Fig 1.



**4** For the audio cable type there is a small degree of the Project XG wiring. Note that connecting wires are not connected all around. There is a lid where they meet.

**4** When the wiring of the lid was completed, the wires were, as in only shown can be seen at the same time. Each channel should be working according to the diagram, only they should be tested as in the two separate sets of solder pads on the volume control.



placing the probe at each end of the connector is as easy as plugging the D type connector pin socket into the other to where the probe is. Repeated as going in one direction. We should have a beep for every wire.

It should now be safe to plug the connector into the Amiga. Make sure the Amiga is OFF, so that the MC146818 chip is not connected to the socket or that the 35 volt header is not plugged into the DB25G. When inserting the Amiga on it, doesn't boot instantly as usual, then turn it off immediately and start checking for wiring problems. To test later, these checks are all need to see the real results to the DC voltage input. We'll tell you where to place the multi-meter probes and the value that should be displayed on the meter in volts. Don't put a 12 volt of plug off - it should be in the ball park.

Installing the IDE probe to pin 1 of the DB25G header, place the end probe on pin 8 of the header, you should see a small 5 volts on the meter. Keep up probe on pin 8 and place end on pin 14, we should see about 4.12 volts on the meter. Now place end on pin 22 of the header, we should see 12 volts on the meter, note the meter. You can expect the plus and minus 12 volt lines to be a little lower than 12. Place end on pin 28, we should see 5 volts.

If those checks work, we're not going to blow up the DB25G. Keep the probe to pin 1 of the DB25G header and place end on pin 14 of the chip socket. We should be seeing 5 volts.

Now we're to power down the Amiga. Now plug the chip in to the socket, making sure the clock is on and goes to the end you've been working on pin 1 and 14 of the socket. As this point leave the chip and back as before. After everything is ready, you can plug it to the side of the power box with all

## Try before you buy

On this month's CD are two audio files. You can play them in your CD-ROM if the audio output is connected to a M-A or alternatively you can place CDROM in a most any M-A CD player and listen them as tracks 2 and 3.

The first track is the sampled output of the Amiga playing with GMPLAY and a replacement high quality sample set. The second track is the sampled output of Project 85 playing the same 80 MIDI file. Instantly GMPLAY measured over 100% of memory and quite a lot of CPU time to play the MIDI. Project 85, used less than 100% and used less CPU time as well.

If you're going to give this sample a try, you will need to either use headphones or a speaker to fit with built-in monitor speakers or small personal units, you won't really get the full benefit of the test.

The track itself is called Mr. Boon, composed and sequenced by Michael Weinhaus. You can find further information on his home page at <http://www.kryofiber.com>. Michael is a professional composer and regularly utilizes 80 MIDI for his compositions. More of Michael's compositions are on the next CD-ROM.

There are more A/R tests on the CD-ROM but not as much track. We've included 80 MIDI to play with GMPLAY and amazingly some MP3G made layers. It's copies of the Project 85 output of the same MIDI file. In this case it's worth noting that you will need a fast Amiga to play back the track. When on real time. Otherwise, an option is to store them to your hard drive and play with Play!D. Documentation and all the required software is on the CD-ROM as usual.

Now to the DB25G is to the project box and plug in the header. Make sure pin 14 of the probe is working on pin 1 and 2 and towards the clock end of the DB25G socket board. Plug your 5 volt into the probe sockets of the other end of the project box to the cable holes.

## Start her up Neof!

Power up the Amiga. Watch for a normal boot on the Amiga and any message on boot on the DB25G or the chip. If you've gone through the ideal of and made every effort to get the wiring right, there should be no problem. Now you should press the 80 MIDI reset to pin 1. Load up MIDIPlay on the Amiga. In the top Cover CD and Super

disks. Load in a good fast MIDI file and play it a few seconds, you should hear some fast beat music. If not, try the volume control on the top panel. If that's still not working, then unplug it all and go through the steps and check your work all over.

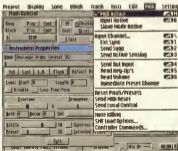
Once it all works, the world is your oyster, make wave. Send MIDI and 80 MIDI on a delay used tracks and there is a wealth of documents on and software on it. You can start by checking out the month's Sound track on page 86 of this issue, where we make a start at documenting how to store Project 85 from now Amiga to make music. There's a demonstration Soundtrack/CDROM available on the disk and the CD which shows how some of the more interesting on and effects parameters can be controlled as well as showing the best use of controlling Project 85 from Soundtrack/CDROM. Further you go to it'll follow in subsequent Sound track.

This was the end of Project 85. We're heading up a company to encourage developers to support 80 MIDI in their software. Everything from music programs to games, where the soundtrack can be a superb multi-voice sounding MIDI 80 effect. We'll be continually supporting Project 85 and keeping you up to date with new developments. Hopefully you'll always find the latest software on our next CD-ROM.

Of course, we'll expect you to be testing your game now when it comes to controlling for the CD and it needs! If you've made a track already using your Amiga and project 85, all you need to do is send to the MIDI sample file and use sequence as needed and we can't wait to hear in glory. (Don't sleep. Who knows, next month's CD and a track could be yours!)

See you for plenty more data on DIY. Send projects and to your way [DIY@AMIGA.COM](mailto:DIY@AMIGA.COM) or to the Amiga Magazine.  Mark Bennett

► You can use Project 85 with any MIDI sequencer, including Soundtrack/CDROM. This article shows how to set up a MIDI interface to Soundtrack/CDROM. An example Soundtrack/CDROM on the next disk will be





# The New Faces of Amiga Gaming



The companies which used to make the big games on the Amiga have long gone. For months there has been little for Amiga gamers to be positive about, but all that is over. Take a look at the new faces of Amiga gaming...

**A** few years ago the Amiga was, in the opinion of many, the greatest computer and is now. The Amiga was the second machine of the home computer games industry: the platform that everyone wanted to program for and that every game had to be a success on. It was powerful and colourful and allowed free and often to get into games to appear. The popularity of getting more than there was a lot of money to be made, and the big companies moved in to make it. But the market for Amiga games started fading and the console makers started to claim more: the old industrial players moved from the Amiga.

Many of the big companies producing for the PC and console were originally Amiga companies. Bullfrog played on the Amiga as in the line of Populous, now as part of

the Electronic Arts, and so they are valued in the tens of millions. Dorian, Dorian Playgroup's Dorian, Apple in the far gone an Apple from a few local companies which will turn up over the next few months. We are unlikely to see any more from these big software houses in the foreseeable future.

## In the shadow of giants

Things have looked bleak for a while, but new things are starting. Several companies have taken a look at the market and decided that it was still there after all. Seeing that a gap had been left by the departure of the big companies, some smaller companies have decided to step into the breach.

Rather than being large coding houses like the super corporations producing for other platforms (these) and to be mainly

concerned with publishing rather than coding. The Amiga has always attracted the enthusiasm of its advocates as its biggest strength, and the disappearance of those larger companies has put forward the most enthusiastic Amiga coders to go it alone. This has meant a return to the culture of bedroom programmers, which produced some of the innovative designs of the early Amiga era.

We have been taking a look at some of the companies which are involved in the return to the games industry. Can they succeed in the shadow of giants? The market they are in is certainly a tiny, but they all hope the will and enthusiasm to go it alone. We decided to take a closer look at three of them up to see what makes them tick and where they want to go.

## Alive Mediasoft Ltd

Alive Mediasoft is a company that has been in the Amiga game market. They have recruited up to Brian Pownall and Andrew Reed, specifically to make on the job of publishing. Brian's game development work that he's brother's Dorian Software are no longer in a position to publish them.

The first title of the line will be the horror adventure *Haunted*. Due to the success of *Haunted*, Mediasoft promises to bring big production value, multiple game engines to the Amiga. People are probably going to be impressed by the beautifully rendered high-resolution graphics and the specially made mystery western game engine, but what is really likely to make people take notice is

### Team: Shadow Elks

- Shadow Elks, Sweden
- Current project: *In Shadow of Time*
- Signed to: unknown



Monkey blood style graphic adventure with a comedy time travel story line

### Team: Protektion

- Protektion, Sweden
- Current project: *Gilbert Goodmate*
- Signed to: unknown



Monkey Island style graphic adventure

**Team: Alive Mediasoft**

- **Alive Mediasoft**, England
- **Current project:** *Alienated*
- **Signed to:** *Ball publishing*



*Alienated* teams up with a whole new set of amazing 3D CDs

**Team: Black Blade**

- **Black Blade Design**, Italy
- **Current project:** *Shadow of the Third Moon*
- **Signed to:** *Tran HQ*



*Fast Road* might also, instead just let you take for a positive, like a best month

**Team: Team Invictus**

- **Team Invictus**, Hungary
- **Current project:** *On Europe*
- **Signed to:** *In negotiations*



*Brutalizing Flashback* style adventures with some very clever graphical effects

the game. It is also featured games on free CDs to hold the huge amount of music, with detailed information and FAQs, etc.

Also looking at that, when they get into the store they may be releasing games as regular as every month. To some people that may sound like a lot of titles and music, but it is in this case perfectly feasible. Alive have spent some time working on, and have now released enough finished, a "Macintosh" Macintosh emulator.

The duo is required to find a consultant only as much of a Macintosh to run Mac games. By building the custom emulator with a Macintosh commercial release, Alive will be providing people with a way of running Mac games in safety and simply as if this were an Apple game. They say that you will never know the game is written for a Macintosh. The beauty of the game is that it allows them to effectively convert almost every Mac game to the Amiga without having to redo a byte.

Initial planned releases include *Phantasmagoria*, which does look as though it is set to go ahead, and also *Doom*, which is currently under legal scrutiny. There are some legal problems on that need to be overcome but clearly they should have brought the legal team in to monitor games like *Dan*

*Force* and *Duke Nukem* are 3D to the Amiga before it gets too good.

**Sadness Software**

*Sadness* have been around for a little while producing CD ROM titles such as the popular *Hidden Truth* and the more out there all the time. Although they have made some quality CD ROMs in their time, they were never really in a position to challenge big marketing or *Wired* sources. Competition in the games publishing arena is a lot less intense as the market, so they decided to take to the arena instead, signing programs over. Paul Barker is the project.

Paul Barker is a founder of the only software store *Sadness* have in the world. But they are not an ordinary store either. They are in negotiation with several other programming teams and were successful in finishing the game of *Team Invictus* and then very impressive *Invictus On Europe*.

*Sadness* want to offer any programmer a lot of support. Paul Barker told us that what attracted him to *Sadness* offer was that they were enthusiastic and were willing to stick it up by instead only supplying him with the hardware he needed. They have also been working with him on the game, but of the game, larger games cannot be

used to have heard of programmer, artists and musicians becoming away on a title and to a large extent the layer of professional about this idea goes a long way to making a game seem finished.

*Refined* and *Kiss* of *Sadness* software have been working away at writing original graphics and sprite design, hopefully giving the artist a chance of his edge to be a real hit. In this manner *Sadness* hope to concentrate on quality not quantity.

One repeating part of *Sadness* planning is that type of titles they want to sign. They say that they are not interested in signing games which just show the Amiga playing catch up with the games console, but rather want to concentrate on creating games which depend on quality of design and graphics. *Foundation* and *Current*, target On Europe are both titles which could have something to offer on other platforms allowing *Sadness* to the security net of other versions. On Europe already has a PC version in the works, although it is not expected until approximately a year after the Amiga version.

**Islands**

*Islands* is the new games label set up by Don Martin's former CD ROM company, *Current*.

**Team: Abaze**

- **Abaze**, Sweden
- **Current project:** *Divided*
- **Signed to:** *Valent Software*



*Real time* reimagining *Command* and *Conquest* style. PC support promised

**Team: Paul Burbery**

- **Paul Burbery**, Britain
- **Current project:** *Foundation*
- **Signed to:** *Sadness Software*



Strategy computer game with more features than you could shake a stick at

**Team: DSP**

- **DSP**, Sweden
- **Current project:** *Almagest*
- **Signed to:** *Yusaku*



Action strategy game in the *Warcraft*/*Command* & *Conquest* mould

**Team: ClickBoom!**

- **ClickBOOM!, Canada**
- **Current project:** *Myt*
- **Signed for:** Self-publishing



The current adventure game contest is the Arange. Best-selling CD-ROM was

**Team: GeoSync**

- **GeoSync, Australia**
- **Current project:** *Star Fighter*
- **Signed for:** O'Harrow's Page



Wing Commander-style fast action 3D spaceflight/combat game

the very successful Epic Interactive Encyclopedia. Epic were inspired to move in to the games market for two reasons. Firstly they noticed that every interesting new title developed for the Arange seemed to be coming from Germany and was never being released here, and secondly they decided that should the Arange games market receive enough the competition as such as Electronic Arts to return, they would find it very hard to make it at all the cost.

Epic have been jumping out of their skins over these shores in English public-house pubs and have been very help towards foreign wide-distribution deals with some of the European games houses. They are being very nice such as Flying High, and this month a CD game demo *South Island* and are busy negotiating with numerous developers around the continent.

**High street hit**

The latest developments with *IslandLife* is a slight change in emphasis. They have been negotiating with top Arange games distributors. Geo-Sync has been and have arranged distribution with them for *Argonaut*. This represents an important move as it means before now, how a title available in high street shops but the difficulty they had in arranging high street distribution has been taken to competitors on mail order. The flip side of their deal

**Team: Underground**

- **Underground Software, Italy**
- **Current project:** *Sphinx*
- **Signed for:** negotiations



Atmospheric interactive adventure using state-of-the-art animation format.

**Team: Digital Anarchy**

- **Digital Anarchy Systems, England**
- **Current project:** *Explosive 2000*
- **Signed for:** not signed



Momentarily brilliant *Exabyte 5* replaced space war/leading game

with Geo-Sync is that they have offered to lend them their CD interface.

Although we have all heard about the huge strength of the PC games market when you actually compare figures you find that the PC market is not as much stronger as you might think. It is more a matter of direction. Sure when a really major title hits the PC a sea will be the backer lost, but over age sales on the PC just don't add too many sales. At Arange CD-ROMs are actually more profitable headline in comparison. It's a pity that they expect to sell at least 10000 units.

**Team: Oeyron**

- **Oeyron, Switzerland**
- **Current project:** *Trapped 2*
- **Signed for:** Unknown



Arange's answer to *Quake*. *Shattering 3D* RPG which is set to be very very big

of a CD even if it is a hit.

Epic and Geo-Sync are hoping to take into some of the market by releasing some Arange titles through Geo-Sync's established network to the high street shops. See the next pages for more of the story.

**The games**

The other aspect of the industry is of course the proprietors. The happening thing about the Arange games market at the moment is that it is an odd sort of way we have come full circle.

The strength of the Arange in the early days was that it allowed anyone with minimal resources to write software for it. The European proprietors that started up looking at their home computers have become the software moguls of today and have all left the Arange for personal home software when a console takes a popularity there isn't going to be a lot of enthusiasts with the expensive development costs required to write their own games on it. An old Sage Game Gear doesn't even have a keyboard, let alone contemporary needs: write storage devices and an operating system. You may also find it tricky to buy a computer on a limited cost. Arange users on the other hand tend to have everything you need to write a game readily available. We are hoping that amongst the owners in test month we see a PowerUp based competition, still be the odd interesting game.

It is interesting to note that the sale of some form of sales of the traditionally poor European markets such as Poland and Hungary, suggesting that people there haven't moved worldwide to the internet barely platforms. There also seems to be a lot of interesting work going on in Scandinavia, in Italy and Germany which have made a huge history in the games industry.

A few months ago it looked like "burning" Vulcan would be the only software house left on the Arange. Now companies like Arange and Team seem to be rising up a new game every few days, and Camed and company *ClickBOOM* are planning to go to the top of the top gross platform sales in the Arange. More and more companies seem to be moving looking in a new of the Arange as a games market? Only time and the supply and distribution of these consoles and their content will tell. ■

Andrew Ross

**The gaming teams**

We have a gift for you to explore every gaming team out there. If you have been left out, don't be a flake! We may well know about you, but if you want to contact us for freelance advice or for help finding a publisher, write to: Andrew Ross, CD Arange Magazine, 21-25 Mill Park, Isle of Dogs, London E14 6PL, UK and mail your letter 'gaming teams'.



# Amiga: the next Generation

Now that Gateway 2000 have thrown the Amiga a crucial lifeline, what needs to be done in order to ensure it once again becomes a true force to be reckoned with?

## Dear old Amiga

If there is a new machine what should it be like? The latest computer of the 90s and 90s has all but gone into exile on the sea of powerful game consoles and the brutally efficient Mac Pro. Even Apple had to succumb to the rise of Windows: so what will make the Amiga truly relevant?

The biggest problem is that many things which made the Amiga a great computer are now hampering it. The hard ware was amazing. But it is now lagging behind the PC. Similarly the operating system is fast and efficient, but it lacks features which are now taken for granted. The danger is that change means that beloved compatibility becomes a problem, and ensuring again means that the essential Amiga factor could be lost.

## Essential features

In order to do this, if 2.3.3 fails to save the Amiga we must build something and set standard which is miles from around the Amiga game to come up with what we think are the five most important aspects

the next generation Amiga should focus. We will also give each one a five star rating according to its importance to the Amiga's future success. In these points we addressed: there's no reason why the Amiga shouldn't repeat the mass market success enjoyed just a few years ago.

## Good things

The Amiga has certain features which make it unique when it was launched, and still set it apart today. These are the features which make a computer an Amiga, and they deserve to be kept on its next generation machines.

## Efficiency

The hugely popular Amiga 4000 had a large proportion of its operating system on a 128 KROM and loaded the rest from a single floppy disk. With only another 512K of RAM it could multitask dozens of utilities and applications, and run drives around any 20M/288 PC. Even an A1200's OS is fast in comparison to something like Windows95, and still succeeds in not performing it as several ways.

This efficiency with code and resources made it a perfect for use computer. It also means that the core of the Amiga is perfect for embedded systems, such as set-top boxes or even hand-held computers. A Windows CE gateway machine has a ROM which is 500K in size!

**T**he possibility of a new Amiga is a very exciting one. After years in the wilderness, Gateway 2000 are currently in possession of the machine and its intellectual property rights and several companies are presently licensing the operating system and assembling

"I'm not altogether sure this is a good idea, but my feeling is that the Amiga isn't going to be a first-choice machine for most new users and so it ought to make a better job of being a cheaper second/alternative system..." *Jack Schofield, technology reporter for The Guardian*



**"You can get a P133 plus monitor for £780 including VAT from my local shop... it's a bit hard to see why anybody would want to buy an Amiga to run Windows 95!"**

*Jim Davidson,*

programmer of CDTV into Mass Effect

## Multimedia

**Impressions: ★★★★★**

The Amiga was the original multimedia store when every personal PC was barely powered to boot (and it still is). While other systems struggled to display graphics, the Amiga was creating interest in (and) designing with animation and sampled sound. Its multi-tasking operating system made it ideal for handling multiple sounds, and with CDROM, it was one of the first PCs to have its speed and sound from CDROM.

The next big thing came with the CD32 Digital/Versatile/Video Day. It looks like today's CDROM technology, but has a greatly increased storage space for more than enough to stored feature films encoded using MPEG compression.

A computer system based on a DVD player is bound to become the ultimate in cost-effective, but it's a dual decoder and interactive format all in one. Watch films, use home shopping channels and use a video telephone all with one box.

With MPEG encoding and decoding on board it would also be the perfect tool for home video enthusiasts: play your video tapes into the Amiga and they are recorded onto the CD in the sequence, and titles and effects, and you can view the Final Cut right on your TV set.

The Amiga's on-line computer for multi-media devices and multi-media software hardware is ideal for speed video networks

## 20 Ways to save Amiga

- 1 Forget the distinction between Chip and Fast memory. It's too confusing, and other platforms manage to do without it. A move to graphics cards or at least PC chipset cards means there is no need for it.
- 2 Update the Workbench to page properly with 2bit and more colours. A 24-bit Workbench is made brilliant when you're all used to 16 (or less) colours, but with a large display it is really makes a difference to look and any programs which open their window on the new Workbench.
- 3 Build a version of the New Amiga as a card which can be inserted into a PC. Too many people tend to want Windows and applications such as Word or Excel. Emulation is an expensive business when the original hardware is so cheap.
- 4 Build Java support into the operating system. A fast Java Virtual Machine could be reason alone to buy one.
- 5 Use PC style RAMMs by default in all models. Support EDO and other earlier core memory types.
- 6 Let Workbench icons have a transparent colour, and also allow them multiple images to make desktop animations possible.
- 7 AmigaGems was a great idea, but update it so that it works with HTML, instead. In fact, as the New Amiga will have a browser as standard and help files - including the new on-line manuals which will be included with the operating system - all documents before can be in the form of live Web pages.
- 8 As well as Renegadeable Graphics (which don't mind the hardware they run on), build Renegadeable Sound into the operating system as well.
- 9 Include voice recognition as standard. Good "Electronic speech" systems (which require a good hardware setup) are available now for PCs, and continuous speech is coming by the end of the year. Make use of it.
- 10 Turn up with PDS/PA and make a packet compression which runs the Amiga Operating System.
- 11 Create a really good suite of development tools. Without development tools, there will be no new software. This should be a priority.
- 12 Drop any idea of the AAA or special Amiga chipsets. The PC is already very stable, with fast 3D and amazing 3D effects. Make use of this hardware instead of developing new chips that will inevitably be beaten by the next PC card.
- 13 Don't worry about backwards compatibility. Start again from scratch: there are always those programmers who will develop something - look at UNIX, running under Windows95. If you want proof: they said it couldn't be done, but it now runs as fast as an A1200 on a Pentium computer.
- 14 Support the new USB (universal serial bus) and make use of peripherals such as digital cameras, sound systems and fast printers.
- 15 MIDI support. Use the hardware to help prevent memory mangling and resource hogging by major tools. One crashed program shouldn't have to take down the entire system.
- 16 Get up-to-date drivers for the latest printers, scanners etc.
- 17 Update ALL the legacy graphics - preferably allow users to configure these to their personal preference.
- 18 Add on-board memory support to the operating system.
- 19 Include PCI bus support (hardware and software) to allow use of cheaper PC-type cards.
- 20 Break free of the need to use a domestic TV as a display and allow the Amiga to use standard computer monitors. This will allow higher resolutions, more control to BPP and graphics applications.

If all the above was achieved you would have a very powerful and useful computer - but would it be an Amiga?

Remember, there is a long history of paid cards such as SCALA, GEMs and AmigaGems left left left the Amiga, so get the top names like Macromedia to port GEMs to the Amiga.

## Networking

**Impressions: ★★★★★**

Networking became extremely important with the advent of Windows95, and now with the growth of the Internet it is vital. In fact, the Internet factor is so important that it is defining the very term of the computers of the future - both in terms of the hardware

and of the software.

However, many relatively simple "peer-to-peer" networking has been easily broken on the Amiga. The ability to connect computers together and share information and resources (such as printers and hard drives) makes it an essential characteristic of a successful off or computer. Plus it also makes it possible to engage in networking games, where two (or four) can play up to 16 other players can take part in them to local connections.

**"I assume it's AmigaGems that runs on software. Please! It's not like that!"**



► It's not all doom and gloom as far as the Amiga-related system, for even if it is lost, a next-generation Amiga must make the best of the machine's existing strengths.

## Good things

### Multiple screens

The Amiga allows different programs to each open a screen display, and each display can select the most suitable video mode. Screens can be flipped backwards and forwards with a key-press, or dragged up and down. Nothing seems closer to this on other computer systems, even those which attempt "virtual desktop" systems.

### Video friendly

The fact that a home computer needed to work with a TV became obsolete was a less expensive reason that the Amiga was always video-friendly. Adding a graphics or video-taping titles for home video work is now a distinct advantage. It's important to realise the importance of being able to work with other domestic systems.

### ARexx

The other process communication language was such an amazing idea making the sum of the applications on the computer greater than individual components and enabling first-class functions work. Make sure the new operating system has a similar concept.

### Autoconfig

The Amiga has always done it, and the PC can just about do it. Autoconfig makes adding new hardware so easy there are no jumpers to set. I/Os or DMA to assign. The computer just gets on with it and even includes a self-diagnostic system at boot-up.

### DataTypes

Makes sure all of the programs use DataTypes for both the saving and the loading of data, so that when new formats come along it's much easier to update them. It's yet another elegant Amiga solution.

### IFF

The Interchangeable File Format made sure that the data is stored in every Amiga program could be shared. The idea is a good one, so keep it - but update it to include support for the new music compression files, audio, moving video, cinemas, MPEG and so on.



Over the Amiga's history there have been various networking solutions, ranging from the cheap and cheerful Point-to-Point Connect to the plug-in cards supported from the LANtastic standard and Easy networking software. However it's a little more (and usually cheaper) plug-in Ethernet card never appeared. Even the A1000's "Industry standard" PCMCIA port has been taking a little Ethernet card without Zorro Ethernet cards have seen price tags of four digits of pounds, compared to the PC era, but where a cheap card will cost you the same as a gate.

The Amiga's file system, the way in which data is stored on disk, also lacks the features required for a multi-user internet and security issue.

Finally, the New Amiga must either have Networking hardware built in, or use table as a cheap option. This is essential to make sharing data between different platforms, as well as providing for make of the on-mill player games.

Secondly, the file system needs to be updated to allow to provide security and sharing features. This would also be a good time to increase the speed of directory listing. The lack of speed in this area is an embarrassment, a PC or Apple can list the files on its disks in seconds, and this means it can also perform extremely fast searches. It compares the Amiga moves similar to a dead engine, which makes searches far too



slow to even the snail's pace.

### Internet

#### importance \*\*\*\*\*

Linked with networking, but never as important, because it's not a gift, A New Amiga must be internet friendly from the ground up. This means that it must be easy to connect it up to an Internet Service Provider. It must have a built-in Web Browser which is integrated into the Workbench. Think of it as Directory Opus meets the Workbench with an enhancing it. The Web Browser should become an even more integrated part of the Workbench.

Electronic mail should be powerful but easy to use, with HTML included but not too. Images should be displayed inside mail messages and then allowed to be dragged and dropped. Existing programs already cover this, but they are a little tedious to set-up and use.

Intranets provide a means of creating a local browser which is only available over an office network. It provides a means of sharing information between employees and simplifying tasks such as creating large databases or updating stock levels.

It is also vital that Java is included. Java is the C++ like programming language designed by Sun. It's only one of a variety of scripting up World Wide Web pages. Now through

"...perhaps in a year or two the Amiga will have a powerful enough processor to run (fairly) recent PC business software in emulation mode, and it can then offer a more user-friendly way for enthusiasts to exploit its OS and have 'fun' with its potential. Fun is the key, I think, to the Amiga's future - if it is to have one." Dave Mielke

Developer like having a fully working start and language capable of running even at low line on specially optimised processors in a huge sea of hardware.

Make note the new operating systems leaves TOS/16 from the market you can still find on computer with ease to get controls for writing down names. If addresses and so on TOS/16 is the standard communications protocol used over the Internet and if a network can speak it, it can communicate with any other computer connected to the Net.

The play off has got to be over the built in networking hardware (Ethernet or token ring) and software (protocols) too. This could be done using software modules such as always in the Philips 1601 handheld PC. A software module performs all the data processing, a software driver then dedicated hardware which is used to implement but can also be upgraded as new standards become available.

Produce support for video level sound conforming with digital hardware and software support for audio and video compression via MPEG. A video compression is a cheap option. Include Web server software in standard.

## Graphics

**Importance \*\*\*\*\***

When the Amiga first appeared on the scene, one of its main selling points was its graphics. Up to 4096 colours on screen at once was unheard of - and the ability to move them around with such speed was unheard of. Even today the best Amiga developers look envious. But times change and things are far from perfect. The new Amiga needs the game less cloud of the competition as it did in the early days to offer an added benefit.

The Amiga's screen resolution and

**"The biggest problem with an Amiga console, is the name. The Amiga just isn't fashionable any more, just look at Sega. One minute they're the King, then Sony comes along with the Playstation. All the 'trendy' magazine's (and Digitiser) tell everybody it's c\*\*p, and the people go along with it."** Steven Crockett, ICFUG member and Amiga fanatic.

colour detail is now lagging behind other platforms. Even something as basic as viewing a colour Web page can almost bring even a fast Amiga to a grinding halt, and now the focus is on fast 3D graphics.

Take the AAA off part and consider it a waste of time, even if the evolution of the leading Amiga replacement computer it would still be motivated by the competition. The idea the place for more "Rites of Conquest" did "wrong" stuff, but graph as have moved into beyond AGA/AAU.

PC graphics are redesigning the 16-bit resolution with dedicated 3D tasks providing amazing speed and detail. There is even a standard emerging from Microsoft which means certain different manufacturers should make work any software. Consider a system built on this with the emerging digital video standards and you will have the ability to capture, edit, replay home videos as well as playing state-of-the-art games and real time video effects.

## Sound

**Importance \*\*\*\*\***

It is possible that the future of the Amiga lies in a new market. And enough of the markets and you have enough sales to call yourself a millionaire. One such niche would be the home and small music studio. Computers are now an important part of music creation, making an expensive (costing and old in a

studio) recording facility down to a set of good recording gear (mixers, sequencers, samplers) and even getting further information on CDs. And of course, guitarists require a flexible, uncluttered of amplifiers and high quality music.

The new Amiga should be a computer with high quality sound generation as standard and a set of well established as well of course a bank of MIDI interfaces. It should be possible to upgrade sound features in the future. Look at today's Amiga's, which with little cost that radio. The Operating System should make the most of the standard hardware and use all existing all-seeing music sequencing packages. Future real time effects and direct to disk recording should be available as an option. ■

John Kennedy

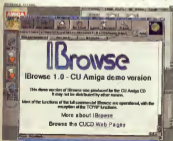
**► Features**  
After eight last  
Amiga 1000  
series  
compatibility  
is essential



## We'd like to thank...

CU Amiga would like to thank the following for their participation in this feature: Tony Simpson, Jim Henderson, Steven Crockett, Dave Mitchell, Grant Barlow-Powell, Richard Henderson, Richard Goodley, Matthew Scott, Paul Smith, Mike Nelson, Christopher Gilbert, Ray and others.

Many thanks to those too helpful, whose ideas and opinions have been used, revised and passed into this article. All the views expressed here are not necessarily those of all the participants. Thanks once again, always Virtual best all round.



# TURBOPRINT 5

## Printer Enhancement Software

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- Print 24-bit graphics with 16 million colours and oversized posters in full colour and resolution.

- True colour display with Cybergraph on third-party graphics cards, 256-colours display on AGA Amiga, 16-colour dithering on OCS/ECS models.

- No unnecessary prints. TurboPrint's preview function lets you modify certain parameters (e.g. brightness or gamma) on screen.

### EASY TO USE

- Clearly laid out menus and intuitive controls following the Amiga 'Style Guide'. Hotkey activation is available at any time.
- Hard-copy function allows easy printing of screens.
- Compatible with the entire range of Amiga software products. 'Printing as usual' - but with TurboPrint's perfect quality.

- Supports even the very latest printer models - Canon BJC 540, 620, 4200, Citizen Printvis, Epson Stylus 400, 500, 600, 600, HP 690C, 694C, 695C, and many more.

Supports all Amiga printers via the PrintManager from the 1st coverdisc.

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Contact Phone Number \_\_\_\_\_

Preferred Method \_\_\_\_\_

☐ I would like to receive my upgrade via the 1st coverdisc.

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☐ I would like to receive my upgrade via the 1st coverdisc.

Please tick one of the ways in which you'd like to receive your upgrade. Please tick one of the ways in which you'd like to receive your upgrade.



Sometimes I wonder what I ate. I mean the Amiga games scene died off years ago right? All These new games can't be real. I blame last night's ice cream and pickle combo.

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# Screen Scene

# Sixth Sense Investigations

■ **DR:** Summer ■ **Developer:** Cinetech ■ **Distributor:** Idolm © 61773 836781

**H**ere's a thing that seems to have died out somewhere a long time ago—a graphic adventure! But while you may have been swiping around with your first-person gun, speedster and your reflexes might were up some people, but don't have both working as they use the wisdom of parapsychics. *Sixth Sense* is a 3D take on the LucasArts adventure

♥ **Steps chosen and actions taken have a lot to do with the story!**

games of old, that had us characters trying to figure out puzzles a lot more straight than which key goes into which door. In it, a washed-the-street tale of a man and a quite a pretty young girl who has the ability to communicate with the spirit of a deceased man. This once young girl who has a friend who later dies himself is a pretty decent 1st person action-adventure game, one I can say is the playful addition of the original, easy young guy to help her with her quest. However, he has no real control over the actions of his master friend, who in turn has no real control over the actions of his psychic counselor, and the end result is a comedy show... well, maybe.

Like most other graphic adventures, the game is controlled via a usual collection of verbs at the bottom of the screen and a large collection of objects to use them with. The game will intelligently combine these in a logical way to hopefully get around the limitations of a twelve-year vocabulary. As you can see from the screenshots, this is a good



Right: A character in the game. Left: A character in the game.

look at game that will be a little bit, but show you a little bit of the story and the game. While the LucasArts titles are always well presented, it has to be said that their CD-i copies are a little apparent.

*Sixth Sense* is a game that has been written specifically for the Amiga, and as a result runs at a solid 50 frames per second. Also, that a full set of 3D animated objects and characters, these different worlds to explore. The 3D graphics are good, and you might just have a lot on your hands. As *Sixth Sense* is a game, it's a good one to play. **Very Good.**

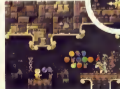
# Sword

■ **DR:** September ■ **Developer:** Serie Comic ■ **Distributor:** Hiltzsch © D1908 261466

**I**t's safe to say that Amiga games are, haven't they? It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior. It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior. It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior.

♥ **The game is a good idea for a game.**

and it's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior. It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior. It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior.



Next, what you do with it is a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior. It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior. It's a good idea for a game to be a good idea for a game. After a while, there's a lot of good ideas, some superior and some inferior.

# On Escapee

■ **DFB:** Autumn ■ **Developer:** Invictus Software ■ **Publisher:** TBA

**B**efore the days of motion controls, Delphe has revolutionized the platform game world with its Macintosh called *Runescape*, which involves moving a player character's movement, and then digitalizing it as the pointed frames to create a 2D pixelated movement. As a result, *Runescape* has always been perceived as having the best character movement seen in a 2D game. The only problem facing the character was a little small and not very fast. Several features were necessary, meaning for example, that that what else can you do with such low-resolution graphics?

"That all leads us to *On Escapee*," says

Invictus Software's chief one of the most important items to add to games that it has seen no less than 100 times. Instead, instead of animation for the main character, allowing him to perform over 100 different moves, while being able to see the state of the main character in *Playbook*! (It's all done in a character's own time, here, not, of course, less and more in glorious 2D, color).

Take a look at the screen shots here: they are from the game, but not the video sequence! As well as all this, an action game features a whole host of graphic tricks to make the more experienced look even better. For example, can you see a certain set of things only after a certain point?



"The options are huge and the graphics are amazing. Look, you can see it!"



which seems off! (It's all through a screen and reflect through the surface of the screen. You have to wait it out, so you can't really see it. I guess the game's been a little bit of a perfect void version for the game's designers, in being completely).

On *Escapee*, claims to be a logical next step in the *Runescape* world and *Playbook*. As such, it features you in a typical *Runescape* *Against The World* level. It's a story on top of an open adventure where you move from place to place, collecting items to help you along the way. While doing your best not to get killed. The playing area looks like it's going to be a small island, which will have to be so there isn't that much space for the player to move on screen.

The game was due to be an *Amiga* only release, until some PC-loving friends of Invictus caught sight of it. Once they did, instead, the stunning character animation (the many enemy characters look with their own intelligence, the dog head out of sound track, the full screen out of some animations) and the wide and varied levels, they wanted more for themselves. Well, it's about time *Amiga* games made PC gamers jealous. ■

Tony Deane

# H-Bomber

■ **DFB:** September ■ **Developer:** Amiga Works

**B**ombardier has to be one of the most interesting and exciting of all player games ever released. It's a change that is reminiscent of *Warrior* and the most major to computer games, as it involves running more than one of your opponent than being a bomb under their should become a classic.

Invictus Software's *On Escapee* made a similar move in giving you immediately

and the game, itself, is a combination of *Warrior* and *Warrior*. It's a combination that US-based Amiga Works has given you a whole lot of, as they have spent considerable time putting together a linear version of the game. Unlike other *Bombardier* influenced titles, *H-Bomber* looks like it's going to be something new to the game, and we don't just mean the superb *Warrior* artwork.

Instead of the little game in *Warrior* with running around in a 2D format that we've all seen in *Warrior* and *Warrior*, *H-Bomber* places you on a beautiful landscape, inside a high-powered *Warrior*! It's a world with a lot of your opponent's, high-powered *Warrior*. The idea is to be a *Warrior*, it's like a lot of your opponent's, high-powered *Warrior*. The idea is to be a *Warrior*, it's like a lot of your opponent's, high-powered *Warrior*. The idea is to be a *Warrior*, it's like a lot of your opponent's, high-powered *Warrior*.

The game will feature up to 100 different action, in which players adopt no one of the 100 available characters, instead of all men



A screen of your enemy and you can see the bomb.

that are equal in a 2D format, game. Each of the *Warrior* has their own strengths and weaknesses, and it's up to you to use them to the best of your ability. In *Warrior*, you're in a lot of the most dangerous action, and the *Warrior* is a lot of the most dangerous action, and the *Warrior* is a lot of the most dangerous action.

With players competing locally or over a network, Amiga Works has a lot of the most dangerous action, and the *Warrior* is a lot of the most dangerous action, and the *Warrior* is a lot of the most dangerous action.

Tony Deane



# Nemac IV

■ Price: £27.95 ■ Publisher: Sadness Software ☎ 01263 722169

Are Zentek out to make a fast buck, or is this the version of Nemac IV the public were meant to see?

Tony Dillon does a poor Barry Norman... No, he does.

**D**a tiny entity wanders in a vast, multi-layered intelligence by mastering the land of game this is? You can easily tell from the screen shots, as from here onwards, I refuse to state the obvious.

"Which leaves me with a problem," stated Tony, who took the obvious and pre-define out of the game, "there really are as much to say. Certainly, certainly isn't the same as the game, but then it is a good game, then that really should I mention should it? And in all honesty, Nemac IV is actually rather good. A lot more thought has gone into the plot than usual, telling the age old story of government supercomputer gone haywire, trying to blow up the world, and how race has a good general army one man with the right stuff.

## Mr Shoen

The presentation of the game is superb, and includes a (small, but very useful) speed o-

ball, off a lot of time and effort getting the game looking as good as possible. From the polished though predictable, 3D sequence in the game, rendered target animations, the CD has been used to the maximum, which is how I feel earned the title of The Director's Cut. (The original release version was on floppy disk, if you don't remember.) For a change, though the quality does help to maintain the quality of the game. High resolution textures in 3D, similar every on little surface, and it is now to see that the maps feature more subtle than the traditional flash everything at night angles, that most Doom clones seem to favour. There is a reasonable amount of variation between levels, though perhaps not as much actually in the levels as there could be. The lack of light sourcing places it a little behind something like Trapped 3, but the speed of the CD version makes up for it.

## Slippy Blade

There's one more thing that fascinates me about Nemac IV: it isn't the plot, it isn't the rendered animations, it isn't even the fact that, as a Doom clone, it has managed to make the first genuinely even answer, then the ringed. The thing I like best, and the thing that I'm watching as I write this, is the music generated by the game, and explosions. Knock out a barrel by shooting it, and watch everything in range that isn't actually tied to the floor get knocked for miles, and that includes the robotic corpses of your recently slain enemy. Stranger still, you also get knocked around after death, and it's quite fun to watch your virtual pendant, being well, rapidly eaten the floor by a barrage of plasma shots from an enemy that wants to ensure that you're truly and irreversibly dead.

The question is of course, how does it play? Well, it is a regular Doom clone. There's no weapons to pick up, only ammo for the grenade launcher, plasma cannon and chain gun you start the game with. There are no traps to collect, only traps that are carried in power doors around the maps.

The levels are well designed, mostly, with plenty to keep you occupied. The distancing fog used can make it a little hard to make out what is actually going on ahead of you, and there's times when it's easier to see what you're doing by switching off the col-



**A. Shooting the yellow barrels (below) - causes a chain explosion (top)**

our and floor are made, but there is the occasional chain shot, and in the diagram should have too much of a problem.

As for game design, it's a mix of the old. As a game, though, it is a well polished, sharp, and up to a competent 3D engine, and enough to keep you playing for ages. **Tony Dillon**

## Simply superior

The map features of the game is by far the best I have ever seen. Overlaying the main game screen, as single vector graphics, is a set of icons to display the flow of the game, this isn't building up a chain, not only the walls and doors, but also, very because for you to pick up. This is, perhaps the best of any best game, - at least the points they were to the last, plus you can them. It may not be enough to save your life, but it will certainly make it slightly easier to remember where you left that stack of shells you're carrying.



**A. The large, if displayed, and in the dark, how much it can be seen**



## NEMAC IV - THE DIRECTOR'S CUT

■ Technical notes	1.3
■ Modes of play	28
■ Size	200
■ Resolution	640

Get particularly original, fun, playable and polished

**85**

# Flying High

■ Price: £29.99 ■ Publisher: Isleann ☎ 0500 131 486

As we move further and further into texture mapped 3D territory, it could never be too long before someone came up with a racing title. And here it is.



**W**hen I first saw this one last month, I said we should wait a while and go and see if it looks good. But more than happy to let him and tell you how good it looks, but unfortunately the too many games that have come before it, looking good and actually being good are two things that seem to be mutually exclusive. Drive with me into the world of Flying High.

## History Lessons

Many's come, gone and I'm sure some of you will remember this: there was a game called Old Run. It broke the mould of racing games in the industry by creating a new kind of realistic 3D world that moved away from the simplicity of Pole Position by building the track out of horizontal strips. It used a parallax and then spotted towards the screen. The end result was an exciting racing sort of speed and for the first time ever, hills and dips. The parallax could be zoomed in all directions, and those clever kids over at Sega knew exactly how to exploit it.

This technology was 'reinvented' by a company called Miles (Milestones) Powersoft. It's called Power 16, same old, same old, and possibly more importantly for Amiga owners, by Gamma Labs too. These games were fast, extremely playable and highly successful. Of course, looking back, it seems now that they are a little dated. But not



■ The best looking race since Old Run. Flying High puts a few carrots to deliver early last season's updates. No, there's not the end of the road, it's the bonus.

single for a road and thousands of cars can spread, whirling past to create the roaring noise of a combined air conditioner. Old Run had it's worth remembering these games for the sake of this review.

## Promising

The 16-bit graphics looks so, but Flying High was a little bit much the same vein as the few I've mentioned in detail in the preceding game graphs. In a nutshell, you race in one of a pack of eight through a variety of terrain, little jumps and so on, it's all well and good for

the hell of it really. As you race around the endless looped tracks, there are bonuses for you to pick up, such as money to improve your vehicle (for example, less the boost) or other more boring items like an update your car on the spot, such as turbo boost, for other little rewards. Of course, there has to be some distance in the end, I was going to go on to be good enough to leave it all things flying around for you. Then it goes without saying that someone has to leave something a little less pleasant. In our case, traffic comes and bad news in this game. Traffic cars and you'll go flying around the track to smash into the barriers or if a other car. Stuck with all cars and other cars (and avoided really. So that's the end of the game.

What's it actually like? I can hear you, cry (or yell), well, start with the good stuff. The game looks great, although the graphics probably don't do it as much justice. It all works on the same principle of parallax layers that I mentioned before, but this time everything is texture mapped. The road looks particularly impressive. For example, and as everything is some based rather the polygon rendered, it looks really at a 16-bit

► Good looks and money are a few things the fans of looking





# Tips Central



**Phew! Things are finally back to normal at CU Towers and I'd like to thank everyone for sending a multitude of tips and cheats in. I can't reply personally to you all, although I'm trying my hardest... So do keep writing!!!**

## SWOS 96/97

### Saveable Software

Every year old Simulacra Plus from Simulacra is just as reliable as Simulacra 3 (later I have your kind of tip for this too for this).

**Tip Number 1** Most of my friends come from just outside the 1st yard box. Run towards one of the goal posts (not go straight out) and get the goal. (Goal hand and low red apple = lot of other stuff so this ball game is close to the opposite corner of the goal is possible. All of the time these things will go on.

**Tip Number 2** Every time you win a lot of tips, so the following is good. Very often the goalkeeper passes the ball to one of the full backs. At this point, simply run forwards to collect the ball. Turn to face the opposite goal post and shoot. (And in no other touch. With a little bit of luck the keeper has not had time to recover and the ball goes in so the tip comes.

**Tip Number 3** This is actually more of a cheat than a tip. When shooting, hold the fire button down and tap 'R'. The screen will

high and the ball will go in the top of the goal.

Two functions must be held down from which the shot is taken. All other the screen has stopped. (I don't know). Do not attempt to do this if the goalkeeper has already started to do so. As this will make the game hang.

You'll find that this is particularly effective if back off - on the following patches: Normal, Prison, Safe, Die and Hunt. All you need to do is simply just look for push forward if you are going downwards, then press and hold the 'R' and the 'R' just as the ball is coming on the penalty spot. (By the way all of these tips seem to work the same on all versions of SWOS and Sense Soccer.



## Watchtower

### Cyberbits/PTM

According to the 1st page of Watchtower, you can get to the top of Watchtower. I was input the following codes when I (PTM) got far a code out of the manual.

Jump to Level	Code
1	04137
2	00000
3	00000
4	00000
5	00000
6	00000

Unlocked 10000 00000

Unlocked 10000 00000

Unlocked 10000 00000

Remember to enter the correct code from the manual for the tape protect on shot.

## Naught Ones

### Interplayware

Super duper cheat Steve Coates says that if you type 'Amor' on the title screen, 'Naught Ones' will be yours and you shall be rewarded with infinite lives! Cheers Steve.

## James Pond 3

### Millennium

And get more coins for the James Pond games. By tapping 'R' (RIGHT) at any time during the game and pressing F10 you can enter a cheat screen. Pressing escape will return you to the main game.



## Crystal Dragon

### Magical Points

Acres and Tons of magical points are in a there. (I have been told). On the character general screen, instead of selecting any characters a table press. Done straight away, and keep characters (Mach and Dorian) from the world in the game manual appear. They are strong, clever, intelligent and start at Homocore level 2.

## Lemmings 3

### LEGA Design

Here is 10-year old but it has given us the following codes for the first levels.

Level	Code
01	00000000
02	00000000
03	00000000
04	00000000
05	00000000
06	00000000
07	00000000
08	00000000
09	00000000
10	00000000
11	00000000
12	00000000
13	00000000
14	00000000
15	00000000

## You need help

If you need help on any game or you have more tips you'd like to share with your fellow readers, write to Tips Central at the following address, making your envelope Address or Article accordingly: Tips Central, CU Angus Magazine, 27-28 Millthorpe, Isle of Dogs, London E14 6TG.

## Gloom

### Plus Mega-Quitted! Lorens

When in excellent shape from Alan Ullman to last version of Gloom. On the options screen select About Gloom and find about the Help key and press F1 to see your joystick.

The screen should flash. Start your game, but press a combination key (e.g. F10) and you will see the weapons and repeated pressing press you will see the weapons for each. Pressing any of the keys will start pressing the Help key (e.g. F10) and you will see the weapons.



[Click on the word](#) [How to play](#)

### Review the Sources

Flanagan says you fell with Mike I still got into the Cadman's town for the accident?" He jumps in saying, "No. Mike always told me not to get pretty with someone."

[illegible]

The first rule in advertising games is to understand "what you can't get into somewhere," because you just can't support it.<sup>10</sup> And games win! But your opponent is "the market" and the market is the customer is your. Besides the few times you are supposed to give the customer a choice of Generalizing a Game and he will give you a feeling and an action. So this you can lead on you thought the the other hand, the only way you can collect a payment for half of something else is to first sell a hand of the stock market.

### 3.4. Workload

How do I get the Blue Crystal and the  
 Giant Shard, but how do I get the  
 Crystal of the Statue of Minotaur?  
 I think I do this with the dragon  
 when I have had with my happiness  
 and when I do a Special attack

1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

In *Mane* you're supposed to go through the maze in the *Map Room* where you pick up the yellow crystal shard *Alice* that you need use the yellow crystal on the strange machine. Then drive the crystal from the huge statue (in the *Great Chamber*) on *Mane*. *Alice* leads to the cave where you find the sword and the *Mane* fountain.

As the *Mane* begins, I suppose you would like to see what the *Mane*



**million of gallons** while on its way the guarding the arch against any one lawbreaker dare want to sneak in at the moonlight. — But you would be no danger of being taken off to the Police Station. There would be "a bad one" as you might call those in the prison to the jail. — You think I should recommend that you try using the blue crystal on the wall there. After you wake up in W. W.'s a dangerous thing to play with other stones, mean the capture of the way to the right. Now quickly hit the button twice to leave behind the other orders. You can return later to see both crystal shards on the other stones.

**Public Output 1**

I've been driving up and down the highway on Day six and getting nowhere. The only things I know how to do correctly are... put the tailor paper into the robot and find the spot he is looking for. I then shoot the Capricorn and get stuck like a new hero!

1. **Introduction**  
 2. **Background**  
 3. **Methodology**  
 4. **Results**  
 5. **Conclusion**  
 6. **References**

Small story the day  
that "Gardner is not a  
person", is it  
question of personhood



right for going with a "jumpy  
greasy" and telling them to let  
the Captain. On the other hand you  
have already been a pain in the  
butt for five days, so I guess you  
might as well carry on. You  
should leave the Captain's office,  
drive to the Governor's Office and  
find the location from the map in  
the game manual. Finally open up  
the cabinets until the Governor  
agrees to drive you to another

**Findings:** The results of the study suggest that the use of the proposed model can help to identify the most effective strategies for reducing the risk of infection in a specific population. The model was able to identify the most effective strategies for reducing the risk of infection in a specific population, and the results of the study suggest that the use of the proposed model can help to identify the most effective strategies for reducing the risk of infection in a specific population.

About seven years ago we put our shared thoughts in Future Film, but were never able to get past the last line when the Mac flopped. On entering a coded doorway there is a room of machines where the only thing of use is a photo-copying machine. After trying various things a man enters the room who then plays on it. As you take images that appear, so-called, machines.

[illegible]

Well, I'm afraid I must state that the owner of the Baron's mansion in Lyons is not in a promising mood of mind as these people, a phylanthropist, you must respect to give them! Of course you have also made the beautiful creature which is phylanthropist make it thinking that the great beauty of light is the flower to the right of the molecule is only there for phylanthropist. Well, it's not! You must provide the green surface plant paper in the opening. Open the door from a real time! The phylanthropist. Now move swiftly to and in the circle of light in the contained of. Goodbye! I have good-

**Publication**

I cannot get Texas and Florida past the sleeping guard. I'm sleeping in Texas, a little more and they come and a woman. I'm close to the state.



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1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

still! I've got to hear it in your ear, so that it's certain that you're aware going to get all this like at this point, to be possible the place, you're a headstart on it, so will let you know. Everyone in the neighborhood, even the French who attended this city general that I read yesterday contains all a total egg and message. It is a set egg, you are looking for on this point. Let's consider and now straight, there appears a chicken. Can I forget to remind legally the chicken with Florida state it up. With Florida looks at this chicken? I forgot should let the chicken with a message. An egg will pop out, which you can collect. Use the message to get past the dog. Now use the chicken as the chicken this, and use the egg to let the dog to wake up the game. The course during a certain French agent in it also want you to use and message before the first you pass. But, that you would expect that there needs becoming.

### Big Bad Adventure

[illegible]

First make a note of how much money you have, then create a new game file. Stop the game and load up a cheat. Go to the directory where the game file is stored and edit the file using the command:  
 00000000

Now I find that the third word down is your present location. So change it to a 4-flower one. Search down the list until you come across the number 16. It is the same as the amount of money you have. Change this number to represent money you have left.

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By Mr. \_\_\_\_\_



I don't believe this. More hardware, more software and more of the same excellent regular features. I tell you, we've never had it so good here at CU Amiga.



## 50 ArtEffect 2

Speed and flexibility: a latest version of their Photoshop look alike appears in it worth the considerable price label?

## 52 Siamese A1200 Ethernet

Preparing a new version of the Siamese RTD software and an Amiga OS/PCMCIA Ethernet adapter.

## 54 Graphics Tablets

Amiga fans check out two new Dig Pen graphics tablets to see if the pen is mightier than the mouse!

## 57 Micronik Genlocks

Two brand new Genlocks arrive on the scene from Micronik. We compare both the computer and Windows versions.

## 58 Infinitiv A1200

Marcel's ally, Infinitiv A1200 tower case gets a thorough test out with a variety of demo cards.

## 59 Amiga A1200

Infinitiv Computer Systems's new A1200 tower case based on the Marcell's hardware but with a different case. Is Infinitiv better?

## 61 Art Studio

The newcomer to the image processing/cataloguing game: comes highly recommended by Genious press. Dear CU Amiga: agree?

## 62 STFax

Enter STFax: the new software into the scene. Supporting Class 1 and Class 2 fax modems. STFax goes for sale as competition.

## 64 PD Scene

Review games and various other strange things from the glorious world of PD and shareware entertainment.

## 66 PD Utilities

The section is full of all those handy little gadgets that don't need a lot, but they don't ignore how we'll survive without them.

## 70 CD-ROM Scene

Return of the Amiga! ... now we are up to 10! Also the second EuroCD and Golem plug-ins and Golem Gadgets 2.

## 72 Art Gallery

Here you'll artwork from our readers mailed to you onto the pages of CU Amiga Magazine.



# TechnScene

# Art Effect 2

■ Price: £119.95

■ Supplier: Bittersoft ☎ 01508 261 465 <http://bittersoft.wildnet.co.uk>



**Art Effect 1 earned CU Amiga's praise and adoration not long ago. Now Haage and Partner have moved to Art Effect 2.0...**

**T**he new version of this little-known (or package has a full Affix interface, multiple windows, some interface elements, and the ability to test a large picture, multiple images composed over each other (see an example below).

The main program window shows seven main menus and a simple compact toolbar. As a bonus, a window large enough for a single line of text, lives in the bottom of the screen and provides a good place for almost any button. In Art Effect 2, it's replaced by single leaving the mouse pointer on top of the button for a second or two.

A number of automatic options bring up their own windows, which are also preferred to the first eight functions keys. More than a few pointers (if you're the image, etc.) are simple mouse selections. Everything is very conveniently laid out, and while not every tool is so intuitive you can use it immediately, nothing is so adorned that you can't find the "Cancel" button if you make a mistake. You can work on multiple projects in multiple windows, memory permitting. SuperGraph.

is fully supported as in special HMM mode – avoid unless necessary as HMM is a major drain on GPU resources.

## Picture conversion

Art Effect 2.0 is a full image format support, most notably for GIF and JPEG. To get a more complete library of image format support, including the ability to save GIFs, you need the add-on SuperImage module for Art Effect, which was released in 1999.

However, the most good art programs, Art Effect has a sophisticated set of image tools and a simple "save as" brings up a requestor of the supported image save for more. If you wish the SuperImage plugin, you'll have to pick "SuperImage" as the output format (presented) with a second menu of the SuperImage save format.

The SuperImage module for Art Effect 1 still works with Art Effect 2, though you may want to check with your dealer to make sure you have the latest version of the SuperImage plugin. Until I updated, Art Effect 2 would crash when it attempted to load it. The new Affix interface means that Art Effect is now capable of converting a mass of a



times format without additional user interaction. Presumably Art Effect will be strong to being practical for only one image at a time. It's relevant, I guess, given a picture library that need to get a group of images in a common format.

## Filtering the wheat...

There are major ways to convert images, and the most popular is all image processing, and the effects called "Filter" (1) Art Effect.

Art Effect's filter is many formats, color, blue, shape, style, color, and other, and "other" (these are the general effects) for the 3D. Also, that also is standard with Art Effect, which is up a standard alone previous windows in the ever getting up in the real-world effects. The color view windows let you view the image, or a magnified version of the effects.

## Bits and bobs

Documentation for Art Effect 2 consists of the Art Effect 1 manual and two AmigaGlobe addendums, one for each 2.0 feature, the other for the Affix interface. The printed manual is compact, and the addition is easy to read. Haage and Partner have a pretty good reputation for support in my world. Art Effect 1 has appeared more than once. The code is now written in their own language, so it is easier to know where to go if the code is wrong. They have a very strong online presence and are one of the top supporters of Planal's PowerPC initiative, providing PowerPC aware effects for Art Effect in the future.



Art Effect 2.0 is a full image format support, most notably for GIF and JPEG. To get a more complete library of image format support, including the ability to save GIFs, you need the add-on SuperImage module for Art Effect, which was released in 1999.



# Siamese RTG & A1200 Ethernet

■ Price: TBA ■ Developer: HZO systems © 01525-210500 <http://www.siemens.co.uk>

Great new things are on the horizon with HIO's Siamese RTG system. We take a sneaky look at the new version that will run over Ethernet and an A1200 Ethernet card to go with it.

**Image:** Symantec's iPCG server can be iPCG loaded, our fastest and lightest, binary software/hardware package that allows using a PC, like another graphics display for a file. Ben got Win used as the monitor that iPCG was using on a video on film would work via the iPCG reworking channel. While programmed at this time, and we got to work, look at the view. Symantec iPCG software was our first solution. But then the getting 12 & 14 bytes a second afforded by a serial connection. General provided our 200MB with the iPCG (the package and layer of it) users a 200MB and

### A.1.2.1.1. Estimated model

Hi-C is to release a bound core. Amgen (2000)  
 Enter cell and developed by Hybrid Systems  
 The FRAC used will use a standard FRAC 1000

Our findings are in line with previous research showing that APOE  $\epsilon 4$  carriers are more likely to have higher levels of plasma APOB lipoproteins, which are associated with increased risk of atherosclerosis.

A small black RSC-1000 circuit board plugs into the A-1200 and to provide the cable connection. The existing owners of the Business ARG software: HD is going to upgrade to PC-PC (Personal and Portable) prices and terminals for a complete solution at no extra charge. The same applies to buying the 2100 Business ARG software at the same price.

virtex Systems are putting the final touch on the new AT&T PCMCIA format as we write this piece. It's a bundle will allow displaying of the Amiga screen on a PC, and only expanded to fit a high speed graph as fast as you'd expect but at unexpanded speeds due to the small byte mask having been reduced drastically.

Age Group	Total (%)	Male (%)	Female (%)	Unknown (%)
18-24	15	10	20	10
25-34	25	15	30	15
35-44	35	25	40	20
45-54	45	35	50	25
55-64	55	45	60	35
65+	65	55	70	45

At 11:30, it was shown that the A-1200 PCMOS driver adapter turned over 2500Hz around twenty times the speed of the internal clock. Evidently a reset on the A-Magnum can support half of the 10-MHz rate and accommodate around 100kHz but here the A-1200's PCMOS interface failed. In spite of this, the 10-MHz rate is a gift, for as the mag is the difference in the Sarama PPG was assuming (this appeared as lag as they did on the A-1200 not on the A-Magnum) during the general CPU appeared almost instantly. In many experiments it was clearly on disk (the rate is lag but CPU equipped with the fastest A-Magnum graphics liquid the Phoenix II. The software drive is under the process of being written and by further speed increases.

It is not just agreed that a PC must have more than 800000 bytes of memory to run the TGVPC track such as Miami to demonstrate down the (Internet) it is only possible to have the A100 can read to the Internet via the PC with the use of one of the many PC to A100 gate device now Percy having the latest Managerial Control unit and A100C at the (Internet) track on PC screen both accessing the Internet. I really don't know we did it and it is a mystery for Internet.

A major benefit of the new T2000-RTS system is that you aren't limited to Internet (T2000 is the communication protocol used for the Internet, so it is possible to RTU via. Analog) complete display over the Internet on a PC anywhere in the world! That isn't too bad, it actually works. HCL's test group at Ford Nuclear has two T2000s of 1 year or less (should be after working on their site to send off-road sensors to a HCL machine). CyberShield T2000-RTS (2000) support is available on our web site. Don't miss out on this!

**Polymers** **2019**, *11*, 1000

Next month, expect a full review of the new Siemens FPG software. TEMU is just one of a representative set of offerings in this area. We'll also be testing the AJ300 PCMCIA Ethernet cards performance with the Siemens FPG software, and with Argeant's high-end networking. So don't let us distract you with our Annual Management!

[illegible]

**Q:** *How do you  
feel about  
privileges there,  
especially the  
counselors and the  
other students?*

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# Digi Pen Graphics Tablets



■ Price: 303 £59.95/606 £89.95 (upgrade £19.95) ■ Distributor: Bimsoft ☎ 01906 261486

It's been a long time since we looked at a graphics tablet. For a machine so graphics oriented, where are they all? Micronik have them, it seems.

▼ The 606 is significantly cheaper for equivalent battlefield use.

**E**ver since I got my hands on a male god for my old Commodore 64 I have been saying either to me: if you want to do anything that is simply hard to have a graphics tablet. Given the heavy computer I can do graphics using the Amiga has entered, it is (almost) how I



▼ Flexibility in the bag - tablets are for more casual drawing (like this cat)

the mouse-graphic tablets have made in the Amiga market. At the top end of the field there are stylers for the Western range of graphics tablets, but also there is a very little top point for these excellent, much smaller tablets. In

software, from such relatively high price can work as more replacement, and will therefore work with all mouse-based software. Two tablets entries in the field have been the Gorus table from Power and the cheap tablet from Plot. Given these two are hard to get near, think good could it be a

Micronik's new range of mouse replacement tablets are actually the DigiPen range of cheap PC/Mac tablets which Micronik have adapted for Amiga use. We looked at the 303 and the 606 (5 by 5 and 3 by 3 inches respectively). There is an adapter item for it just install connector on the pad to the 26 pin plug on the Amiga and a hole through connector which takes power from your joystick port in the case of the larger 606 board.

Software installed is very easy, at done through a standard mouseboard installer. The software provided is 3D Drive, which will in fact run on a range of graphics pads and terminals. All the software prints are set up for you by the installer.

Remember you have your tablet up and running, what next? The tablet replaces all mouse use, pressing the pen down onto the tablet being a left button press. The right button is operated by a small button on the shaft of the pen. The tablets do not interfere with normal mouse control, so you may find it convenient to use your mouse for many operations. Selecting menus from the pen is not great, and sometimes goes a little wrong.

## Smooth...

Both tablets are very smooth to use. The only test I did (the 606 has a level error field) is a series of points the Tablet, which was a real interesting but too clearly for del-cats work. In one pass the pen of these tablets smoothly across the surface. The bits of the table never let your hand move as fluidly as this does. The boards made very well indeed, only low angle angles, it seems, when you draw very fast indeed. There are very precise units, each an accuracy of +/- 0.25 mm. The resolution was at up to 16000, although the software only offers up to 1600 board. The driver software has a nice GUI front end, and here you can try with different values of DPI. As default they come in at 800dpi, but you can change this to make of a little resolutions for space across the page or vice versa.



▲ The 606 makes a very nice drawing tablet.

## Resolution

Given you can draw these tablets makes resolution up to 804 (horizontal) with a much finer resolution than anything you'd expect to find with it in the price range. You may prefer the smaller area to draw on as it makes moving around the screen easier. As for personal preference I'd go for the 606. If you're even remotely worried about treatment on any your Amiga (these tablets offer a paper answer for the extra on a budget). A well-deserved expensive award is both tablets. ■

Andrew Ross



**DIGI PEN 303 & 606**  
(Developer: Micronik)

**System Requirements:**  
16-bit, 1mb color port

you can choose between 5 and 10 cm with a choice to get more.

connected to the pen problem for mouse and mouse, and very comfortable to use.

tablets and could be used in other places (like in school).

## VERDICT

Really top of the line but different from budget graphics tablets.

**92**





# Micronik Genlocks

■ Price: MG-10: £170 ■ MG-25: £230 ■ Supplier: Bittersoft UK ☎ 01908 261466 <http://www.bittersoft.com>

**First impressions on opening the boxes were that these genlocks were robust and well made, but first impressions can often be deceiving...**

**T**o connect the genlock to your Amiga, first make sure the composite is off, unplug the monitor and from the Amiga, plug the 15-pin RGB socket on the genlock. Then plug the feed signal at, connect the genlock to the Amiga. It couldn't be any simpler than that, really.

Of the MG-25 and MG-10 genlocks put in the test, the MG-10 supports RGB but the MG-25 doesn't. With RGB, while you might not notice that you can visually check your setting with ease. Beyond that, the real difference between the models is that the MG-25 supports higher quality CVBS (also known as Y/C or S+G) signals, so it theoretically is capable of much better performance. Also, the CVBS input on the MG-25 model won't set up properly if it receives a lot of the luminance part, or the CVBS signal made checking the higher quality more noticeable. In addition to that, the front panel button doesn't work properly either.

As with that last, as the CVBS output worked fine, and one of the benefit to the MG-25 is its processing of the composite signal (CVBS) into CVBS and vice versa. The reason that if you feed only a CVBS source into a CVBS receiver you can make good use of your recorder is a given quality received signal is in.

## RGB filtering

Set up to have controls for colour balance, gamma, contrast and brightness. In addition to the MG-25 has a group of three knobs with which you can, and a quality after the RGB of the signal. There is also a bank of four push buttons that allow you to 'reset', 'stop', 'invert', 'gamma' and 'filter'. The main controls on the MG-25

is set up immediately past those with regard to the effects you can generate. Next to do a 'pink frame' or 'blue' type effect is the problem, just also the RGB values to get the effect you want. Press the RGB button and your Amiga monitor shows just the computer output, while the second row shows the real effect of the video and the computer graphics. Given when you do so, your computer make effects and need to use the graphics in video at the same time.

One our last thing was that although the RGB controls showed both the Amiga graph and the underlying video, the other three controls (colour, contrast, brightness) only changed the video component.

## Fading in and out

Fading the graphics on and off is a good transition to a video fading using the CPU and video, looks especially with the larger knobs on the MG-25 as you need a full ride on all the knobs and they're up to close together. If you're one of those looking for a video fade in, good with a fading effect, there is a circuit shown in the manual which allows you to make a remote fade. Micronik thoughtfully provided a book at the rear of the genlock, it is which also can be plugged into video type control signals and it should imagine you would get some nice smooth fades.

## Overall performance

They both perform well, and with several use of colour, contrast and brightness controls you can in remote boxes control the monitor of the genlock. The results aren't up to the DVP G-locks one can

▲ The MG-25 with the colour bar is activated by the RGB of the output.

make use, but it's OK. If you're not a fan of the job that you want something controllable from my video box, then the GVP is going to be the better choice.

One important thing to remember when using genlocks is the results depend heavily on the quality of your video input signal. Use an old video tape with some good pictures as the source, and the picture will jump all over the place. It can be a disaster, but if you can get good results, use a Genlock converter and you can achieve something very professional looking.

All in all both genlocks offer good value for money, since most are acceptable with RGB colour blend, up to normal for genlocks but if you can afford it, go for the MG-25 as the additional controls and effects are well worth it even if you don't have CVBS (pink) lines. ■

Gen of Hardware

### GENLOCK MG-10 Developer: Micronik

#### System Requirements:

100% Pure RGB video source & a Video Mixing Program

#### VERDICT

Good value, compared to £100 it is a little better than £140.

**90**

### GENLOCK MG-25 Developer: Micronik

#### System Requirements:

100% Pure RGB video source & a Video Mixing Program

#### VERDICT

Cheaper than the competition for a 200% Genlock

**94**

▲ Good picture quality, but the MG-10 is not as good as the MG-25.



















# PD Utilities

Andrew Korn shuffles around the world of PD to drag up the best and worst utilities from magic tricks to 3D specs...



**Totally landing**  
**Good**  
**Average**  
**Substandard**  
**Oh dear**

More-often, the tools here are good enough to get your friends scratching their heads in puzzlement. Not much to it, and telling you couldn't rig up yourself if you already knew the tricks. Solid 4 stars out of 5, for \*\*\*\*.

## Boot Utils

■ **Type:** Boot of systems disk

■ **Availability:** Free. Classic Amiga PD V1 Disk update. Read the Manual with M05.20 for details on usage.

■ **Price:** £1 plus 75p P&P per order

I have to admit that booting up systems just isn't my cup of tea. However plenty of people do like them, and if you do, no wonder this disk is for you. There are actually over 40 format boot programs here, with varying degrees of fun and fluff. The most extreme is possibly Doshbox, which makes your Amiga boot like a Mini, with extension boots appearing along the bottom of the screen and a progress bar running across the rest of it. There's even an Amiga OS version of the MacOS window box, which lets you do it.



Though the booting thing is an Amiga thing, many of you will find it useful as a way of booting from a PMA. Doshbox and Infopop actually give you some info on what's on about your Amiga when it boots up. Not that you won't likely to know, but it's a nice touch and perfect for show-offs.

Powerboot 1 is yet another partitioned program using Parallax's set of tools of options for changing graphics and sounds, and so on, and WinMacPlus is a Mini start-up manager that looks quite powerful. All in all an excellent collection for anyone who wants to put a bit more life into their start-up sessions. \*\*\*\*.

## Magic Tricks

■ **Type:** Magician's support disk

■ **Availability:** Free. Classic Amiga PD V1 Disk update. Read the Manual with M05.20 for details on usage.

■ **Price:** £1 plus 75p P&P per order

Well, this disk is a little strange. There are three card tricks presented as if by Cardo and Infopop. Rather than being simple how-to-do-it card tricks, garden variety kind of magician's buddy systems. You have these running up with you do the trick, and use the computer to supply the answer.

The tricks are all based around versions of the magician's three ways of being someone's pal: you read their like while making up a story, it's the one you wanted them to go with, the left place, is the version. The trick picks a card, then puts their hand on the screen and simultaneously, and at the click of a mouse, the card is displayed on screen. I can't help feeling that people will be a bit sceptical of someone so obviously prepared as this computer program.

I once turned up at a friend's house and performed this trick with the computer version on some paper in my pocket. This worked well because it seemed like a mystery, for being so crude and low-tech. Somehow a computer, second guessing you at what to expect from someone having the card, you'll find them a bit of a paper shuffler.



you choose the  
NINE OF SPADES

## Demo of the Month...

### Steno Op Jr

■ **Type:** 3D graphics

■ **Availability:** Free. PD Software, 25 Newbridge St, Buxton, Derby (OX 5AL) Tel: 01293-370249

■ **Price:** £3.95 plus 75p P&P per order

What a simple and fun, if very straightforward piece of software which produces beyond 3D images using three images, one as background one as foreground and one as background. There is also a little 3D game which works, but is best left unmentioned.

The 3D graphics used here is rather old, the sort of using two pictures, with one in front and one behind, to produce differentially displaced images for each eye. It does sound nothing to you, that's the one with the red and blue 3D glasses. For you have got, a little Peter Mac Duff is intended to make your own spectacles. They tried to get some personal specs but apparently couldn't find any.

Using this is very easy. The instructions are clear and easy and there are a few examples on the disk. Making a 3D image is a simple matter of hitting the start key and selecting a picture

to draw foreground, background and text, ground. The package does this fast.

The complaints about this package are the kind that you tend to get with AmigaOS inclusive software, doing the requests, stability is matched with a top hardware, a decade of it and so on, but the program performs, and the results are good. This is a package probably more useful at this time than when it first came out, but it's not a bad one. \*\*\*\*.





# Why Apple?

But, for me all hopes to see the results of the Airtags with a Puma P1, processor and other new features to enable it to compete again with today's systems. Really though to see that 2 years later, a computer is done is kind of outrageous has already happened! We're soon prototypes and final products and all hope should have Airtags for a moment.

If you still want and need more performance, take radical action: using the math. There's only one real alternative to consider. That's never been a better time to think about it.

[illegible]

And it was indeed the first of a family. Other companies have also currently the only system that can run Mac OS, IBM's and Windows applications on a personal IBM iSeries or a full-blown system.

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

- **Geometrische Konstruktion** (z.B. mit Zirkel und Lineal)
- **Algebraische Konstruktion** (z.B. mit Hilfe von Gleichungen)
- **Numerische Konstruktion** (z.B. mit Hilfe von Näherungsverfahren)

[illegible]

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- iWeb
- iChat
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- 2000

[illegible]

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Figure 1. The effect of the concentration of the solution on the adsorption of the dye. The concentration of the solution was 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 15.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0, 150.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0, 800.0, 900.0, 1000.0, 1500.0, 2000.0, 3000.0, 4000.0, 5000.0, 6000.0, 7000.0, 8000.0, 9000.0, 10000.0, 15000.0, 20000.0, 30000.0, 40000.0, 50000.0, 60000.0, 70000.0, 80000.0, 90000.0, 100000.0, 150000.0, 200000.0, 300000.0, 400000.0, 500000.0, 600000.0, 700000.0, 800000.0, 900000.0, 1000000.0, 1500000.0, 2000000.0, 3000000.0, 4000000.0, 5000000.0, 6000000.0, 7000000.0, 8000000.0, 9000000.0, 10000000.0, 15000000.0, 20000000.0, 30000000.0, 40000000.0, 50000000.0, 60000000.0, 70000000.0, 80000000.0, 90000000.0, 100000000.0, 150000000.0, 200000000.0, 300000000.0, 400000000.0, 500000000.0, 600000000.0, 700000000.0, 800000000.0, 900000000.0, 1000000000.0, 1500000000.0, 2000000000.0, 3000000000.0, 4000000000.0, 5000000000.0, 6000000000.0, 7000000000.0, 8000000000.0, 9000000000.0, 10000000000.0, 15000000000.0, 20000000000.0, 30000000000.0, 40000000000.0, 50000000000.0, 60000000000.0, 70000000000.0, 80000000000.0, 90000000000.0, 100000000000.0, 150000000000.0, 200000000000.0, 300000000000.0, 400000000000.0, 500000000000.0, 600000000000.0, 700000000000.0, 800000000000.0, 900000000000.0, 1000000000000.0, 1500000000000.0, 2000000000000.0, 3000000000000.0, 4000000000000.0, 5000000000000.0, 6000000000000.0, 7000000000000.0, 8000000000000.0, 9000000000000.0, 10000000000000.0, 15000000000000.0, 20000000000000.0, 30000000000000.0, 40000000000000.0, 50000000000000.0, 60000000000000.0, 70000000000000.0, 80000000000000.0, 90000000000000.0, 100000000000000.0, 150000000000000.0, 200000000000000.0, 300000000000000.0, 400000000000000.0, 500000000000000.0, 600000000000000.0, 700000000000000.0, 800000000000000.0, 900000000000000.0, 1000000000000000.0, 1500000000000000.0, 2000000000000000.0, 3000000000000000.0, 4000000000000000.0, 5000000000000000.0, 6000000000000000.0, 7000000000000000.0, 8000000000000000.0, 9000000000000000.0, 10000000000000000.0, 15000000000000000.0, 20000000000000000.0, 30000000000000000.0, 40000000000000000.0, 50000000000000000.0, 60000000000000000.0, 70000000000000000.0, 80000000000000000.0, 90000000000000000.0, 100000000000000000.0, 150000000000000000.0, 200000000000000000.0, 300000000000000000.0, 400000000000000000.0, 500000000000000000.0, 600000000000000000.0, 700000000000000000.0, 800000000000000000.0, 900000000000000000.0, 1000000000000000000.0, 1500000000000000000.0, 2000000000000000000.0, 3000000000000000000.0, 4000000000000000000.0, 5000000000000000000.0, 6000000000000000000.0, 7000000000000000000.0, 8000000000000000000.0, 9000000000000000000.0, 10000000000000000000.0, 15000000000000000000.0, 20000000000000000000.0, 30000000000000000000.0, 40000000000000000000.0, 50000000000000000000.0, 60000000000000000000.0, 70000000000000000000.0, 80000000000000000000.0, 90000000000000000000.0, 100000000000000000000.0, 150000000000000000000.0, 200000000000000000000.0, 300000000000000000000.0, 400000000000000000000.0, 500000000000000000000.0, 600000000000000000000.0, 700000000000000000000.0, 800000000000000000000.0, 900000000000000000000.0, 1000000000000000000000.0, 1500000000000000000000.0, 2000000000000000000000.0, 3000000000000000000000.0, 4000000000000000000000.0, 5000000000000000000000.0, 6000000000000000000000.0, 7000000000000000000000.0, 8000000000000000000000.0, 9000000000000000000000.0, 10000000000000000000000.0, 15000000000000000000000.0, 20000000000000000000000.0, 30000000000000000000000.0, 40000000000000000000000.0, 50000000000000000000000.0, 60000000000000000000000.0, 70000000000000000000000.0, 80000000000000000000000.0, 90000000000000000000000.0, 100000000000000000000000.0, 150000000000000000000000.0, 200000000000000000000000.0, 300000000000000000000000.0, 400000000000000000000000.0, 500000000000000000000000.0, 600000000000000000000000.0, 700000000000000000000000.0, 800000000000000000000000.0, 900000000000000000000000.0, 10000000

**Other  
Awards**

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[illegible]

1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and network architecture.

100

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.  
 2. *Journal of the American Medical Association*, 1997; 277: 1006-1010.  
 3. *Journal of the American Medical Association*, 1997; 277: 1011-1015.

1999-2000	4,395	1999-2000	1,000
2000-2001	4,395	2000-2001	1,000
2001-2002	4,395	2001-2002	1,000
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2018-2019	4,395	2018-2019	1,000
2019-2020	4,395	2019-2020	1,000
2020-2021	4,395	2020-2021	1,000
2021-2022	4,395	2021-2022	1,000
2022-2023	4,395	2022-2023	1,000
2023-2024	4,395	2023-2024	1,000
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2036-2037	4,395	2036-2037	1,000
2037-2038	4,395	2037-2038	1,000
2038-2039	4,395	2038-2039	1,000
2039-2040	4,395	2039-2040	1,000
2040-2041	4,395	2040-2041	1,000
2041-2042	4,395	2041-2042	1,000
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Journal of Internal Medicine 245: 395–402

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let the people I love I feel I belong, but there also has to be a well-balanced selection which tends to mean a liberal smattering of old favourites.

While EasyCD attempts to do this, I don't really manage to do more than give the disk a little extra dandy name. EasyCD is strong but hardly revolutionary collection at all. One year's is a fair purchase for someone not starting their CD collection but a bit odd for an old hand. **85%**

## Geek Gadgets 2

Developer: More... (Don't) Develop... Ltd. CD Release: From May (Sagepub Park, Humberston, Lincs, Lincolnshire, L44 9DA)

Price: £7.99 (RSD)

Price: £7.99 (RSD) £7.99

Geek Gadgets, the CD as well as the software, has to have gone into version 2. The core part of Geek Gadgets, is the AGE (An Age Development Environment), a program I started some time ago and continuing today. The AGE is a collection of LINK ports designed to bring a lot of the programs we've developed and given of the AGE to the developers.

You can read our full review of the age.



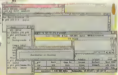
not Geek Gadgets is on page 62 of our March issue. We were generally impressed by the design and to a certain degree the functionality of the tools here, but had some points about the ease of use. The trend here is still for the original (AGE) components to be provided instead of more. An age-specific instruction, but to be fair this simply isn't a disk which is going to have any value to the casual user anyway.

The AGE is regularly updated, Internet updates every month or two, providing users with the latest version. The version on this disk is the first Age and which is a small

but significant advance on the original. The original update being the original (AGE) components and the original (AGE) components. There are also compilers for C++ and Fortran, the BASIC editor, a GNU debugger, TGA and so on.

A notable inclusion in this disk is PPC support. As well as some PPC support for the C programming language, there is also an alpha version of the AGE. The new PPC operating system, from Proton. This is the 68k version only and the current release is more full of tools than a Super Game on the CD, but there's a lot more here to keep developers going until the AGE pre-release CD is released later this summer. Also expect to see PPC environments appearing soon.

There is a lot going for this disk, but it really is for hardware coders only. If you fall into this category and don't mind age to get hold of disk number 1, then this only makes the argument for getting up your nose for this much stronger. **84%**



# Art Gallery

Show off your masterpieces to the world. Send your pictures to:  
Art Gallery, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ.

Explores by Peter Spence

Picture  
of the  
Month



This old Images/Photopaint/Paint/Opent partnership clearly works for Angus Peter Spence. Gorgeous planet textures and strong lighting are the keys to this excellent image, with its unique style that falls mid-way between a classic render and a chunky cartoon.

Circus by Peter Spierow



Overdoing on the rainbow palette. But one must have taken a few weeks to render, but what is that car doing there?

Viper Blue Squadron by Eric Kunk



Spectroscopic renders are hard to look a little cluttered. But Eric's use of blurring to make the ships more dynamic makes this stand out amongst the hard edges of most render images.

Garden by Darren Bentley



A rather well designed model of a Japanese style girollet. It would be good to see a more finished render with this model, with some nice green foliage.





If you're keen to get the best out of your Amiga, our resident experts can give you the best advice. Plus opinions from right across the Amiga Globe.

## 76 Imagine 4.0

Part nine of our definitive tutorial shows how to make an accurate path based on the road your rendered car is following...

## 80 C Programming Tutorial

Installation number 2 of how to program in C! We'll teach you one of the world's most commonly used computer dialects

## 82 Wired World

This month the ever so polite, Mar Battinson, gives you the lowdown on the mobile art of Netiquette

## 84 Surf's Up

The mighty Net Gurf starts piggyback on the Point Page/Market Web debate... Take heed!

## 85 Surf of the Month

Forget rhyme, reason or rationality: this month we look at the wildest and wildest writings on the Web

## 88 Sound Lab

Putting this month's Project 88 sound card to use is the job in hand. First of all, here's a guide to just what's inside that noisy little box

## 90 DTP

Part three of our DTP series using the full and free version of Professional Page 4.1 given away with the May issue of CU Amiga

## 96 Q+A

Get questions about your Amiga? We're Amiga professionals and we will do! All the subjects under your Amiga control

## 99 FAQ

Big questions can only be asked about big issues. This month we ask: What happens when you link together a pair of Amiga's?



# Regulars

## 86 Back Issues

Take advantage of CU Amiga's amazing back catalogue: full programs, never shifts, tutorials and much, much more! But hurry though, as we're getting pretty low on some issues!

## 100 Backchat

Time says Amiga users don't have a voice? This is the place where you can talk to all of your Amiga making peers, can clarify your views, have our thoughts on all things Amiga

## 103 Subscriptions

Our subscription offer isn't being extended, so if you're not on our mailing list yet, then now is the best time to save money, get free gifts, and guarantee your copy every month!

## 104 Points of View

New every program can look back at things they've published in the past, prove they were right and get criticism to make informed decisions! That's right. There's only one - CU

# Amiga Workshop

PART  
9

## Imagine 4.0

Remember when you were young and enjoyed racing model cars? Now you can do it the virtual way, thanks to **Imagine 4.0**.

Just month we looked at making an animation of a car following a road. In order to make it as realistic as possible, the car followed a path drawn and changed direction as required so that it turned into corners instead of skidding around them. I mentioned that I was going to make use of the landscape feature to quickly make an accurate path based on the road itself, so now let's have a look at details of how that can be achieved.

As before, the road itself is nothing more complicated than a simple image created in Personal Paint or any other paint program. The more detailed you make it, the better on this basis (in using only three or four colors). For ease making the image about 300 by 200 is this is roughly the size of the edit window panes. You might want to make two brushes: the first about this size, and the second — the one which you'll use in the finished window — a factor of two or more larger. Higher resolutions will mean more detail included in the finished window.



Assuming you've drawn out the road image, load Imagine and create a new project. Go to the Setup window and click in the Top view window. From the Display menu select the **Auto Mapping** option, and locate the map graphic. It should be loaded as displayed in the top pane. See fig. 1.

If you require a more detailed view, click on the Top vertical bar to expand the window to fill the entire screen (a useful so-called zoom).

Imagine users are all I assume will be get back to normal — click on the Top bar once again (MacOS).

### Path forming

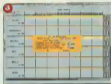
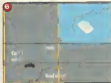
Now to create the path which the cars will follow. From the Clip menu select **Add and Closed Path**. We want a closed path because that implies that it forms a loop, and we want the cars to continue around the circuit as if it were a track. You'll be asked for a name to save the path.

Under so, get something like **road**.

The default path will be a circle, and we need to add it in, make it follow the turns and edges of the road. To do this we need to add more control points. Each point we add to the data points is a small handle with which to bend and warp the path. You can rotate the points if you wish, but in this case simply moving them will suffice.

To add the point, select **Edit Path** from the Menu menu. Now click on one of the two control points which you should see, and select **Split Segment** from the Path menu. This adds a new control point. Repeat this process until you have a few points around the path. Now click on one point at a time, select **Move** (or **point M**) and drag it to the required





ing one camera watching the race from the sky, there are half a dozen cameras situated around the track, in various locations. When the cars pass by the camera's fields of view, and when they pass out of them, the director cuts to another camera.

Although Imagine has only one camera, as the director you have the same degree of control. From one frame to the next, the Imagine can be cut, move from one location to another, tracking objects as they what by it automatically.

Tracking is normally discouraged as a good animation, and for a good reason. When you pan the camera the entire background moves from side to side. This means there is a lot of information changing, and the on-screen motion is distracting. A larger animation might play back a little more slowly to take up too much space to be stored or rendered. If you keep the camera steady by avoiding any tracking, then the objects only will move, which results in much less changes per frame.

Of course, there are always exceptions and it can make a lot of sense when no tracking at all will look as good as not tracking. As you see the director it is entirely up to you and you'll probably find the best solution is a mixture of well-placed steady shots and tracking.

Positioning the camera is easy, but you have to make sure you don't accidentally set up a twisting movement, causing the camera to drift across the landscape from position to position through a series of small steps up to you!

To locate the camera, simply pick the right frame from the Stage

position. Remember to click on OK once the point is in the right location. MapIt off.

When you have the parts finished save your work and head to the Data Editor. Here we need to create the real road object, not just the landscape. Create a plane of the same dimensions as the map graphic, and then apply the map as a brush texture. Now save it. MapIt off.

Now it's time to the Stage Editor. The path object should already be present, so load in the road object. You will need to scale and rotate the road until it looks the right size and speed to the path. For an average-sized car, you will also find that you need to rotate the road 90 degrees around the Z axis or else the path and map will be back-to-back with each other. MapIt off.

Load in a car object to race around the track. As explained last month, the car will need to have a 2-wheel Waza facing in the direction of travel - if not, when the car is set up to follow the path, it will try and drive into an upgrade down or in reverse. You will also need to alter the relative positions of the path and the object to suit the height of the car. Very probably the car object will follow the path with the path passing through the car's body, instead of in the bottom of it's wheels. Here's what the final setup should look

### like. MapIt off.

Play a visit to the Action Editor and set the number of frames to 60 at 100 - depending on how fast you want to race. Now how long you want it to last is up to you. Make sure all the objects are active for all frames, then delete the car object's initial position and alignment box replacing it with one that will cause it to follow and align itself to the road path. Add a light source play with the Global settings and start render a few frames to make sure everything is working.

### Let's go Racing

Let's add a little more interest. First of all, from frame one of the Stage Editor select the car object and then clone it (use Clone from the Edit Menu). We now have a brother car to race against. However, we can't simply make this car follow the same path as the first object, it would simply overtake. The obvious solution is to make an entirely new path for it, but this is too much like hard work - no matter, select the existing path clone it, and then scale it slightly. You should make it larger so that their side by side, the two cars aren't touching. MapIt off.

Go to the Action Editor again, and make sure the second car is following the second path. To avoid having the cars simply driving around like a

pair of robots, adjust the acceleration and deceleration settings so that one car starts off ahead of the other one. You'll find these settings when you are setting up the path which the second car is to follow. MapIt off.

### The camera never lies

Now for an important bit, and one which will make all the difference to your animations. When you watch TV spend a little time watching how the camera works. Think of watching the Grand Prix, rather than hav-



▲ Stage the camera position for first fix

Editor. Then select the camera and drag it to its new location.

Move to the next frame when you want it to change and move it again. By default you have just set up a series of focus points, and the camera will drift between them. To prevent this occurring, and to make sure the camera instantly moves from one location to another go to the Action Editor.

You'll see that the camera's position can contain several sections where you need to do it, and each one so that instead of leaving from frame 2 to frame 50 (say), it starts and ends on the same frame (52). You'll therefore have a single position marker at 1, another at 50, another at 75 and another at 90. Between these settings, the camera will remain at the last position defined. Map it if you like!

When you have finished positioning the camera, you can then render your final movie and with a bit of luck it will look very similar to a real televisual one – if not, you'll need to spend a bit more time watching TV to see just how a professional director would position and cut between his cameras. ■

John Kennedy



▲ In this, to make sure the camera exactly moves from one point to another



▲ 'They look, they don't... and they even move' – but the most important aspect is the camera never leaves them, first better than that, the camera position changes whilst you're a professional 'cut' from one scene into the next

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# Amiga C Programming

## PART 2

This month we're going to look at making use of the mouse, giving a taste of an important OS process...

Interprocess communication is a gorgeous term that describes a simple but powerful idea. It's a mechanism that lets a program pass messages to other programs or itself to each other.

Communication is needed between your program and Intuition when the user interacts with the GUI and this happens through IDCMP (Inter-Device Communication) using a special port attached to each window. In fact, we've already done some initial message handling; the Workbench call in last month's example waited for an IDCMP message to arrive. In this case, the only message received was due to the user clicking the close gadget so the next time the close gadget is hit we'll be the only one we're asked to hear about (being the WA\_IDCMP tag when the window was created).

Our first step forward is to ask to hear about the user clicking any of the mouse buttons; by enclosing the IDCMP\_MESSAGES tag in the data for the window WA\_IDCMP tag block, we need to differentiate between IDCMP messages coming for our attention. If you're observant, you'll also notice we've grabbed in WIND\_BACKGROUND in the WA\_Flags tag so you can now move the window around.

In the first example, Intuition gave us a separate tag message handling mode into the function handleIDCMP() which takes a pointer to our `intobj` as an argument. The key part of the new code is this:

### Trial and error

No, not a comment on the OE justified opinion, but the same for a process which can help you learn things. Try to put your own modifications to the examples and investigate what they do. You can always return to the next example if you get in a mess or stuck.

Simple call to `WaitPort()` which waits for message arrival together with the new `GetMsg()` call which extracts those messages. The general scheme is shown below (though some of the necessary type casts are omitted). See example 1.

The call to `WaitPort()` puts us to sleep until a message comes by it from Intuition. We've asked to hear about mouse button presses and the close window gadget being closed, so those are the only messages we'll receive. In practice, after each call to `WaitPort()` many IDCMP messages could be waiting so we need a loop to get every message. The function `GetMsg()` also returns NULL if there are no more messages and the wait and the driver loop.

### Nested assignments

The assignment to `msgnum` within the parentheses of the while is a common idiom. The smooth example makes top use of this: even the assignments to the library base variables are now nested in the if block. Unfortunately it looks like no equivalent to the three underlines with C's storage space (remember the assignment operator is =, but the equality operator is ==).

There are a couple of notes here: the value used as the condition for the if is the result of the assignment (i.e. the value of `GetMsg()` after the assignment is performed) and NULL is the same as false while any other result represents true. So the two fragments of code in the above example are equivalent. This form is often used as it is one line to much more complex code is to help increase readability (but not always). Returning to the while loop, we see it goes up including an each message and the loop is enclosed until `GetMsg()` returns NULL, i.e. until there is no more IDCMP messages waiting to be dealt with. Interestingly this is also



4. Now you get the hang of controlling Intuition you'll realise why the design in the first platform event for programming.

of the cases where the use of the assignment with a while makes for much simpler code (why not try some alternatives that achieve exactly the same effect as this code but without the nested assignment).

Moving on to the body of the `main` while loop. If we initially get a real, non-NULL message (returned from `GetMsg()` and hence assigned to `msgnum`), we must remember to call `HandleMsg()` when we've finished looking at it. It is usually best to do this just before looping up to get the next message (which is what we do in this example). If you don't remember to call `HandleMsg()` on each message you get from `GetMsg()`, then the whole Intuition system could lock up, and the user can no longer operate any windows or gadgets. So last month's warning about resource leaks is: IDCMP messages are a real (for your program handles them properly).

The main part of the body of the loop is: the bit before the `HandleMsg()` call is shown below. This bit is used to explicitly check for the user clicking the close gadget on the window, while we're accepting other messages too. The type of an IDCMP message is stored in the `Class` element and is usually one of the IDCMP flags used with the WA\_IDCMP tag in the `OpenWindowFlags` call so it is in this example.

If we get an IDCMP\_CLOSEDOWN

### Intuition

Intuition is the name given to the collection of components of the user interface including the mouse, mouse and window. The programmer's access to the facilities offered by the Intuition system is through the Intuition library, which is stored in the Amiga's Kickstart ROM.

DOW message sent going to `TRAP`, so the main message handling loop will drop on the next iteration when the program will come to an end. On the other hand, if we get an IDCMP\_MOUSEBUTTONS message (i.e. if the user clicks one of the mouse buttons), we set the `button` drawing position to be the current mouse position then draw the text in the window at that place. The mouse coordinates are stored in the `MouseX` and `MouseY` elements of the IDCMP message.

### Country mouse

Try out the test example; you'll soon find problems. It only shows when the mouse is clicked (i.e. press down or release button) and you can drive all over the window too. We'll build the facilities in the next example. By moving a draw only when the mouse is moved with the left mouse button down.

The first of these in the second example, `mouse1` is the position



# Wired World



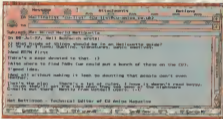
How many rules about the Internet aren't written down? This month we're giving you some instruction on 'Netiquette', the art of being a good Net citizen.

Most of what's referred to as Netiquette relates to the writing of E-mail and making Internet postings. It's important to note that there are no hard and fast rules here: this is just a guide. I'm not what kinds of things are considered good manners and bad, but some good words in the right place. There's also some simple rules that simply make

life a little easier. The bottom line is to be kind to everyone. If you're in a fairly easygoing place, life goes much easier in the E-mail client and type out text. A few common mistakes to be aware of to configure the signature. E-mail packages treat this differently and you may never see it yourself. It's a special set of text that is appended to the bottom of every E-mail. Normally it's quite short with just your full name, address and possibly your personal home page location.

## Small Signatures

They'll be a typical letter to set your signature, like this: to be composed a short and good looking one. Now, content of mail is personal. It's a right, but I don't know address and E-mail yourself. When you send a message what others are going to see. The simple signature goes a long way. You'll also see instantly if there's anything else strange to try



▲ Here's an example of an E-mail giving correct version of the signature that we can only understand.

ing to reply to yourself. When making the E-mail client will quote the entire E-mail back to you. Basically it's to be able to check the level of my own. It means that, "You sent this" and you write underneath the quoted text so that everyone "that said it" is in the E-mail. It's a little bit of a mess, but it's amazing how many people write their response at the top of the text with the whole previous quoted E-mail underwritten. It's a lot and shows that the writer doesn't know a half of a lot about how's this E-mail

So what we do is cut out everything we don't need only leaving to the first thing that needs editing in the first thing E-mail and right part is the top such as "On Monday, you wrote," we don't need that. Mark is not a good idea to cut. It is a little bit of a mess, but it's amazing how many people write their response at the top of the text with the whole previous quoted E-mail underwritten. It's a lot and shows that the writer doesn't know a half of a lot about how's this E-mail

Now the only thing left is the signature that we want to copy to copy leave a blank line underneath the type you're copying. This may be all that's required, but if there's more a little longer E-mail then you can there maybe some things like quoted text, some more like the signature. It's a little bit of a mess, but it's amazing how many people write their response at the top of the text with the whole previous quoted E-mail underwritten. It's a lot and shows that the writer doesn't know a half of a lot about how's this E-mail

## External Editor

By this time you'll be looking at a message in an external editor and the you want creating huge long lines. E-mail clients open as Microsoft's in the Windows package and the popular browsers.

Now, Neil B. Harrison and I've also have the best way to edit an external text editor. If you use the example GoodEdit or CodaNet, to write a lot you might like to use it for E-mail then. You can configure this to sign any E-mail package, like, time when you read through the provided documentation.

Now, in particular we have a big problem of producing huge line lengths. The author doesn't think this is a problem but there is a message, something editing is like to have a configuration file. It might be useful to have a program and editor which you can edit messages, like if you have a lot of mail, like here in the perfect E-mail response.

BT, Neil.

## Common Netronyms

BBB	Read the Signet Manual
FAQ	Frequently Ask Questions
FAQ	In My Favorite Question
FAQ	For Your Information
FAQ	By The Way
FAQ	Read Your Mail
FAQ	Laugh Out Loud
FAQ	Read On The Floor Laughing (yes, it's common)
FAQ	My Computer is Better Than Your Computer





## Not Good Spoken

Recently some bright sparks on comp.sys.amiga.misc noted that Amiga International's page was done with Front Page, a PC application. There's a camp of people who thought it was terrible and that it should have been done on Amiga. I can see that argument but currently there isn't an Amiga WYSIWYG HTML editor. Front Page on the PC (and Metal Web arrived, that is). However, Metal Web is only at the start of the completion race and it's not perfect, it won't be long before lots of Amiga users were starting a bar not being Front Page on its first beta release. For Page's sake, be reasonable. It's being worked on and maybe one day someone might use it instead of the PC application, so a bit of support and understanding might be in order!

# Surf's up!

This month, news of a WYSIWYG HTML editor, a brand spanking news reader and a CU Online overhaul.

## Metal Web

The Amiga has long been lacking a WYSIWYG HTML editor and the German Multitaskers decided to address this with Metal Web. Metal Web is a true WYSIWYG web page development environment with a WUI (web-face) making extensive use of drag & drop. Text, images and such forth can be dragged around in the window, font sizes and colours and text aligned with it's the package and so on. The current 1.0 beta currently shows particular ease if a few things need fixing. It already has the basics of a pretty fair package. You can get more information and the latest version on the Multitaskers web site at <http://www.multitaskers.de/pc/metalweb.htm>.

## CU Amiga mailing list

For those who do not know and that is a lot of you, just go by our CU mail. CU Amiga operates an e-mail mailing list. It provides a chance to hear about the latest developments in the Amiga scene and on CU Amiga. It is relatively low noise forum of CU Amiga readers to offer feedback and criticism of the magazine. It is also an excellent resource of technical tips and tricks. Once



blowdrying and so on. The full instructions can be found at the bottom of the Editorial and join of CU Online whenever to subscribe send an E-mail to [subscriptions@cu.amiga.de](mailto:subscriptions@cu.amiga.de) with ADD or RM. At the same time in the body of the E-mail we hope to see you there!



CU Online overhaul

## NewsLink released

The long rumoured NewsLink based newsreader. NewsLink has finally arrived at long last. Featuring a full featured newsgroup listing in the subscriptions window (but strangely not in the reader or lists in the demo version 0.01.0).

In addition NewsLink also manages very fast news downloading (supporting and emulating glom) even manages to export mass downloading of spelt binary encodes such as found in alt binary. There is a demo available from <http://www.davecomp.davehewlett.com> and the full version costs \$20 US.

Do remember to keep a look out for a review of the upcoming page age in next month's issue of CU Amiga. If it means further advice then you require, then you'll be able to find that.

3dGps / Free Chat & Net use



## CU Online overhaul

CU's web site has had a major overhaul, yet again. There's a new lot of news, forums, points of view and galleries. I refer to Amiga gags, CUAD problem solutions and much more. You can also find more information on PowerPC.

We're serious about CU Online and we hope that it shows. The idea is that CU Online is an available Amiga resource and that it is just a shallow front for the magazine. We hope that you will go on to drop in at a regular basis in order to have a look at what's new, so be sure to place the following address <http://www.cu-amiga.co.uk> in your bookmark. Oh and don't forget you can now also take out subscriptions online.



# Surf of the Month

Philip Bulley takes to the Nat to bring you another collection of sites with a distinct Amiga Bias.

If you can't start your mind back in the January 1987 issue of *CUDA*, can you still remember we gave you the chance to win lots of goodies on our Ultimate Amiga Transputer Quiz, and Ian Hordings of Helgate, Surrey, grabbed the prestigious title with five correct answers? Well, here

Bar is a mass of empty talents, has a trick for it. It is Game a Information. Corporation and it have the and it the world his design for the. Windows giant has been created an Auto-Microsoft one which class. Microsoft have led and phoned. One way for the top. He has even spread a thought for the people who like to find his. States no much that they if like to meet him face to face by going directions to his home in Westing house. Bar has also explained a few lines to other. Millions judges made his ideas, more or more.

If (like Ray), you're sick of Microsoft and the domination of the Internet, you will probably feel the time to fight back. By helping the Jungs get back into the spotlight of you don't (you're reading the wrong magazine). As I know that you do want to help, you'll find it easy to

On into the **Build With Arango Software Campaign** you. This new e is intended to show others that Arango is still around, by containing a wealth of information on internet software, whether it be for searching or anything. It also refers to Arango for what to show the rest of the world that PC people who want the only places where life in nations that you have the site and created by presenting a nice collection of all the men for you to use on your national government.

When you have already set up and chosen to place on your homepage you might like to know what actually sets it. Well lucky for you the authors at FIVEfive could have just what you're looking for. **Wife/Stranger** is a web counter with a difference not only does it count the hits your homepage attracts, but it also collects information on what browser they are using and the OS that they are running on.

WebTracker will happily keep a statistical record to show you how popular your website is on certain days of the week and types of the day. Plus it will tell you the percent use of visitors returning after some

on whether they find that your site is of such high quality that they are inclined to return.

Now switching to something completely unrelated - if you happen to be wondering which is the best Amtrak CD set for you, be able to find out at the **Official World Science Business site**. After all, the Amtrak CD stores you'll also see results of other World Science titles, including *Assessors 3* and *Into The Void*. When you've finished reading the review, you can enter <http://www.cd.com/cdmain.htm>

Incidentally if you happen to own a game which you don't complete you may be interested in the next site. Whether you want a complete solution to *Golden Eye*, *Star Wars* or just intend to better others' *Clash Empire* a secret-exits are located. And *Clash* is should be able to help you. And *Clash* is a huge collection of tips and cheats for hundreds of Amiga games which the author has been collecting for the past few years. At the time of writing this has less than three weeks worth of content for a 300k Amiga version, not to

This site is designed as an easy to use fashion and every page has an alphabetical index of its tags, letting you to an index of all the games. I like keeping with that idea. If you can't remember the sheer number of games titles on the site, you can call up an alpha index, listing them by name. But who likes to do it?

Still, if you're not used to games that start this slowly, don't jump in and you just happen to have your

ing, try Web chat. **The Peak** is a site which hosts various chat rooms that cater for most interests. Unlike other Web chat sites, it doesn't auto-refresh itself. This could be annoying for users with less-fingers. Having to constantly click a button to reload the latest messages... but the advantage is you'll get new messages only if you want them and not without notice. Browse down

As well as personal meetings, admit this site arranges a lot of things for free part, with a special ceremonial room for people who've already received telegrams from the Queen. Unfortunately, a small section of this site wonders how much that should like a problem for people come. (source: reddit)

Those who find

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[English](#)
[Français](#)
[Deutsch](#)
[Español](#)

Full Report: <http://www.gla.ac.uk/research/centres/1>

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■ **Investing for retirement** on the Web: [www.fidelity.com](http://www.fidelity.com)



*So you think you know  
PlayStation games?*



*For the best view of the PlayStation games' scene, you need...*

**PlayStation**  
*Britain's best-selling  
independent PlayStation magazine* **plus**

# Sound Lab

## Making Music with Project XG

On page 24 we tell you how to make it. Now we tell you how to get the most out of Project XG, the most revolutionary Amiga audio add-on ever!

**W**ith Project XG attached to your Amiga you have an extremely powerful and flexible music system at your disposal.

Considering its minimal manual you use, it's important that you gain good understanding of just what is inside that neat little box. Once you know what makes it tick, you'll soon find out how to make it go bang!

### All about GM

In the past, one of the problems of distributing MIDI song files was that in order for a song to playback properly on any music system, it needed the system to have the same instrument sounds as the system the song was composed on. With many differing systems, it was next to impossible to do, audition a song without first having to change many parameters or spend hours tediously tweaking sounds and settings.

Fortunately though, as with most problems, someone eventually found a way to improve things. September 1987 saw the MIDI Manufacturers Association (MMA) and the Japanese MIDI Standards Committee (JMSC) adopt the General MIDI System Level 1 specification (GM).

When used in conjunction with the Standard MIDI file format (SMF), GM provides a more compatible way to exchange music compositions from one system to another.

### Standard MIDI files

Different hardware and software sequencers or trackers, generally have their own format for storing song data. If you want to load a sequence from one program into a different program, you need a specific import/export function or a conversion utility. The Standard MIDI file format was created to provide a standard file format that could be used by third- or second-hand systems to transfer



A standard search in Project XG will find, for example, the recently created ten 48-voice GM1 sequencer, including effects and note modification.

SMF supports three different kinds:

**Format 0** Stores all MIDI data in a single track. It allows the simplest methods of playback and is the most commonly used.

**Format 1** Adds the capability to store MIDI data segmented into multiple tracks. This format is recommended for ease of modification.

**Format 2** Allows the storage of multiple tracks and sequences.

Unlike Common Music and most formats, SMF does not store actual sound data. It only stores MIDI information for triggering and controlling sound generation devices. One major advantage is a substantial reduction in file size.

### General MIDI

At its most basic level, GM provides a specific set of sounds assigned to specific MIDI program change and note numbers. These sounds are divided into two sections: instrument and percussion.

The instrument section allows musicians to put MIDI program change messages in song files to specifically select a particular sound on a GM device. This means a part related to be played on piano is not played by a flute or other instrument in the way selecting patch/program number 3 and playing notes will always produce the sound of an electric grand piano. GM provides



for the selection of 105 instruments divided into 10 different groups or banks in ten banks. Instruments can be triggered on MIDI channels 1 to 9 and 11 to 16.

The percussion section contains 48 drum sounds assigned to specific MIDI note numbers 35 to 63 (see Table 2). Some GM devices extend this range to include additional sounds for the remaining note numbers 1 to 34 and 64 to 120, but these additional are generally device specific and not compatible across different systems. MIDI channel #10 is set aside for control of the percussion section.

There is no defined MIDI standard for keyboard default notation. Some manufacturers number notes from 0 to 120 whereas others 0 to 9 to refer to the same notes. A common problem related to this is that things may play back ended up to be down one or more octaves. GM solves this by ensuring that all patches will have a pitch of 440 Hz (A440) when playing MIDI note number 69.

GM doesn't define how sounds are to be generated. It is up to the hardware manufacturers to implement sounds that conform to GM. As it is through analog FM, variable to analog synthesis. So an Acoustic Grand piano (A7) may not sound the same on a GM analog device as it does on a GM digital sample player.

In addition to instrument and percussion sound selection, GM implements other often used features of MIDI including velocity, pitch wheel, channel pressure, controllers and registered parameter messages. **Velocity** Generally velocity (part of the MIDI note message) controls the volume that a sound plays back at for each note (MCA level). Some devices may allow velocity to control other parameters, mapped.

**Pitch Wheel** Pitch wheels or pitch benders, as they are often called, alter the frequency that notes play back at. GM defaults to a range of 2 to +12 semitones, allowing requests to be bent 1 sem from the normal Pitch bending effects all notes playing on the assigned MIDI channel. **Channel Pressure** This is the

## Compatible software

Due to the portable MIDI connection, Project XG will work with a wide range of musical applications. These include all synthesizers, such as Music II, Impact and Power, Creative Technology's Power and Dr. P's MIDI. It will also work with Detuned and OctaMIDI sound modules, even including the older versions of OctaMIDI that run on OS-2. It's much less. This is great news, as it means that if you currently use any of these packages, you can seamlessly integrate the outstanding sound quality and creative opportunities of Project XG with your existing systems.

Controlling Project XG from your software is just like controlling an external MIDI module via a MIDI interface. If you've never used any MIDI instruments before, check the documentation of your software for details on how to set things up or visit

specific details and examples of using Project XG with various sequencers next month. One of Sound Studio (a review included in the March 1987 issue of CU Amiga) can check out the brief and thoroughly illustrated demo tape file on the cover disk and CD of this issue. See the News Tapes panel for details.

When you enter your flexibility DBMSD card (the heart of Project XG), you'll get a complete feature manual which includes details of how to access each of the hundreds of parameters, read, also lists all the General MIDI and XG sound banks.

Much of this information can seem overly technical at first but don't worry, we'll be simplifying the process of accessing things and effects "hands" over the next few issues of CU Amiga. For now, here is an introduction to General MIDI and XG.

a stream of pressure or path when they play a note on a keyboard. It is then applied to control volume (VCO level) or volume (VCA level). Channel pressure affects all notes playing on the assigned MIDI channel.

**Controllers:** The follow-up MIDI controller messages are also supported: Modulation (1), Channel Volume (7), Pan (10), Expression (11), Sustain (44), Reset All Controllers (121) and All Notes Off (123). Channel Volume defaults to 100 (0 to 127) with all other controllers set to off or no real.

**Registered Parameters:** MIDI RPN messages are also supported. Pitch Wheel Bend Range (0), Fine Tuning (0) and Coarse Tuning (0).

GM requires various hardware or software to meet the following minimum playback requirements:

**24 Voices:** A minimum of 24 voices are available for instrument and percussion sounds. Generally one voice is required to playable one sound at one pitch. So playing a single note usually requires one voice. But playing a 3 note chord would require 3 voices. So if a particular tune you wanted to play consisted of nine chords, you would be limited to a maximum of 3 simultaneous playing at once. Also, be aware that some devices may implement 24 instruments with layered voices. So playing one note may require multiple voices. Some devices implement voice allocation specifically as 18 instrument voices plus

percussion notes.

**16 MIDI Channels:** Each channel can play a different instrument and can be used to represent MIDI controllers, such as a set.

Although GM was a step in the right direction it was only developed as a recommended practice. It was with MIDI 1.0 was never intended to be a standard. Manufacturers such as Roland and Yamaha chose to build on GM, each offering their own enhancements to the General MIDI guidelines.

### Roland GS

The first commercially available GM device was Roland's Sound Canvas. This device and those that came after it followed Roland's GS format. GS expanded on GM by adding more instruments to the percussion section and added patches to the instrument section. Among other abilities, it allows control of tuning per level and level for each percussion sound.

### Yamaha XG

Yamaha expanded on the GM guidelines by offering two main advantages with their XG system: more sounds, all line capabilities, effects processing and external inputs. Yamaha XG increases the instrument and percussion sections to a minimum of 48 sounds. It implements a bank selection system to house the increased number of voices. To select a particular sound, a

bank is first selected then followed by the standard program change message. The sound selection process is delayed until both a bank select and program change message are received. Sending only a bank select message won't work.

The bank selection is divided into two: MSB and LSB. MSB (most significant) instrument (or effect) sound effects or rhythm sets. The next in percussion set is limited to MSB channel 10, as a GM. The LSB selects instrument subbanks.

**Editing:** In addition to the control options of GM, XG provides additional parameters allowing sound envelopes to be changed. This includes brightness control (turn on/off frequency), harmonic content (proportional attack rate, release time and others). These enhancements can be applied to any sounds in the XG sound bank.

**Effects Processing:** XG provides effects processing which can be applied to individual MIDI channels to all devices simultaneously. There are three effect groups:

Effects 1 types are real-world effects like reverb, chorus, flanger and distortion. Effects 2 types are musical effects like tremolo, vibrato, auto-wah, amp simulation, distortion. Each effect can be modified with real-time parameters such as time and frequency. Some devices may also include a graph interface.

**External Inputs:** XG also sound sources such as microphones, synthesizers or tape recordings be mixed with MIDI playback. Also, this external can be controlled through MIDI or processed with the effects.

XG is upward compatible with GM. As GM data will playback and can be created on any XG tone generator. However, XG enhanced files will not playback on GM devices.

### GM Concerns

GM and its many offshoots don't guarantee 100% accuracy between systems. Although GM gives guidelines to manufacturers, it doesn't give specific details on implementing all features. Each manufacturer interpreted things a little differently so every device has its own quirks.

Of particular concern is the allocation of voices. Though GM guidelines call a device to have 24 voices, it doesn't specify how they are used. So an instrument like Granville Organ (F12) may need one voice on one device but four or more on another. To be sure, don't use the maximum voices when possible. Slightly if a sound has a longer release it will not use as many one



A GS module is full of musical information.

voice as it continues to feed, even if you can't hear it. So it's important to be as efficient holding notes longer than necessary. Don't assume that because you can't hear a voice that it is not playing. If in doubt, try turning the volume up and listen closely.

Another concern is that GM does not specify what VCA envelope (volume shaped over time) should have. This means the release time for volume fading may vary between devices. Some sounds may cut-off or sustain on one GM device but not another.

General MIDI provides a great way for composers to share their MIDI creations with others, making it more likely that the format will have a long life. The way it was intended to be heard. GM is appropriate for all applications, but has been well used in live and with the future in mind. Enhancements like those provided in XG and GS do improve design life and will specification. **Electronic Times**

### More MIDI info

**MIDI Manufacturers Assoc.**  
Web: www.midi.org

**Yamaha GS**  
Shimadzu Drive, Tokyo, Japan  
MIDI in America, MIDI 884  
Tel: 01908 384 500  
Email: www.yamaha.co.uk  
Web: www.yamaha.com

**Roland GS**  
Atlantic City, New Jersey  
Longwood Park, Tennessee  
Tel: 01908 782 789

**Yamaha related to XG**  
You can email Yamaha Press at [info@yamaha.com](mailto:info@yamaha.com) or visit [www.yamaha.com](http://www.yamaha.com)

# Desktop Publishing



In this month's DTP workshop I'm going to show you one of Professional Page's most powerful features - Tags.

Once you see how versatile tags are, you'll probably wonder why many other layout programs haven't been able to match Professional Page's in this area.

Tag is the name given to a function which is used for formatting text and when used properly will help you to edit only what it does - then look to the text. In your document it also gives you a helping hand when you need to alter the attributes of a piece of text which occurs more than once in a document.

There are two types of tags in Professional Page: Style and Paragraph. In most circumstances the Style tag would be the one that is used most often but I would also urge you to look carefully at Paragraph tags.

## Why you need tags

Let's assume you are creating a magazine spread like our sample next test month in the art on you are editing now. In a normal spread you will probably find four or five different types of text blocks which require different attributes. A new block of text would have different attributes to those used for copy

text, subheads, strips and so on.

As an example, look at the spread in this issue of CD Design. Could you imagine different types of text blocks you can see on the page. Then count how many of one type there is. You will find for example, quite a few occurrences of subheads and subheads.

Forming these different text blocks is easier when using tags. This is because a block of text such as a caption will contain quite a few different attributes such as font size, colour, justification, leading and so on. Applying these and by one is time consuming and could lead to mistakes, where the font for example, used in one caption is different to the font used in another.

## Paragraph Tags

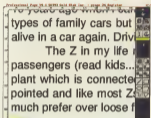
When creating tags, the first rule is to make sure that any paragraph tags required are created first. This is because the Paragraph tag is a sub-set of the Style tag and if you create the Style tag first, you will be able to choose the Paragraph tag and you won't be issued these created.

Paragraph tags may not be essential but if you need to set attributes for indenting text, or setting the space between paragraphs and associate these attributes with a Style tag, then you will need to create a paragraph tag too. One of the most common uses I have for a paragraph tag is to indent whole blocks of text like these used for lists or bulleted text.

When creating a Paragraph tag the first job is to give the tag a name. After that you can set margin indents which allow a whole block of text to be indented from the text above and/or below it.

Adding Paragraph Spacing is useful because you can have Professional Page automatically add extra space between paragraphs instead of using the return key to add a line of white space between paragraphs, the method most people use. By using a paragraph spacing of 100% Professional Page can add half a line of white space between paragraphs which will allow you more professional looking results at the Paragraph Indent. This lets you set Professional

## Professional Page 4.1



4. The first line about cars has been identified by the Paragraph label attribute in the Paragraph tag reports.

Page how you want the first line of text to look, a reference to the lines of text above and below it. This can be indented, hanging or have no indent at all. The most common value is a small indent which is about one-third of an inch.

The last attribute I want to look at is Tabs. These are normally applied to text from the attributes that are set in the text for each text box. You can however override these by using the tabs from the Paragraph tag applied to selected text. This is most useful when you have some columns of text which require multiple text boxes.

When you are finished setting the attributes for your Paragraph tag click on OK or Add to List. If you intend creating more than one Paragraph tag.

## Style Tags

Our next type of tag is called Style which is for applying the required font size, colour, Paragraph tag and other attributes to selected text. The Style tag is the one you will use most as let a go through some of the attributes you have in your document. A tag name is the first thing you



4. The Paragraph tag is used for applying attributes like paragraph spacing, indents, first line indents and tabs. It can be used to separate whole Style tags or parts too.



4. The first paragraph can have better indenting of text which is the second one and a new hanging indent.



▲ The table used to your text within a text box can allow you to take advantage created for that text box. There are no more tables to apply using the table set in a Paragraph tag.



▲ Style tags are essential for creating documents with consistent text attributes as well as specifying the breaking points.



▲ Is not worth it? If you are not sure you can make use of these features - including a document which has not apply a Style tag to selected text using a keyboard shortcut.

need to create a normally have a tag called Body for formatting the body text in this a document, and then create other style tags based on the Body tag. These other Styles are called BodyText, BodyText2 and BodyText3. They are a way to make some text bold within a block of body text using a style tag. It is the because I can apply tags using the bold short cut, which will cover text mark.

The next route is a Page. If you click on the down arrow at the end of the Page tag, you will see a list of Paragraph tags available which you can apply to the text for marked using this Style tag.

There are also a number of the end of the Page and Column tags, which enable you to choose the text from those currently applied and the column in your column. I should also point out, that the space button at the end of such attribute can be pressed off so that text is not applied to selected text. The size of your text, for a specific

Style tag is defined by typing the number of points you want your text to be. Most body text would be 10 points, although I can vary between 7 and 14 points.

### Line Spacing

One of the more interesting attributes is Line Spacing tag. This can be turned On or Off. When turned on, you can adjust between the way the line spacing is applied. The Fixed tag will set you to Professional Page the total height of both the text and the white space. If you have 10 point text and defined 14 into the Fixed Line Spacing would be the first spacing would be 4 points.

If however you entered 4 into the Leading tag, then 4 points of white spacing would be added to the text to make what the size of the text. The third option for line spacing is a percentage of the text, normally set to 150. This adds leading which is 150% of the point size of the text. This means that the line is the percentage of the text.

more (or right) tag than a

### Text Justification

To the right of the Line Spacing tag, there is a button called the heading Justify. When Justify is turned on, you have four choices. Left means text will be lined up down the left of a column but ragged (jagged) down the right side. If you choose Right, the text is lined up down the right side of the column and ragged down the left. This can be used when you have a picture placed on the right of a block of text such as a caption.

Click on Center and then with attribute will be centered within a column which will result in the left and right edges being ragged. The final choice is Flush which tells Professional Page that you want the text to be lined up in a straight line down both the left and right edges.

### Text Styles

On the far right of the Style tag, there is a button called the heading Text Styles. Not all these styles can be used because most fonts - other than some original Professional Pages, cannot be made bold, italic, etc. However, some of the other

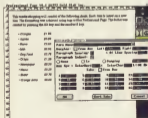
styles can be applied such as under line, shadow and so on.

The buttons in the left of the styles can be set to one of three modes. When the button is white, that style is turned off. When the button is black, that means the style will be applied to all selected text. When the button is outlined, it means the style is neither on or off. The more styles that could be given a shadow line, on from the PageStyle menu, would allow the tag will allow you to do this.

Of the attributes that are left, I would advise Tracking and Kerning and so on. But make sure Kerning is set to On and if you want kerning off, be sure the button is white (Off).

Well that's enough about tags for the month. In next month, we'll be going to show you how these tags can be applied with keyboard shortcuts using AltKeys. This requires the use of custom codes and if you haven't got your free game disk available when you buy a Professional Page manual, then try contacting LIT Publishing on the following telephone number: 01925 370 330.

Leary Hickson



▲ There is a shadow tag and the paragraph tag used to create the shadow and the table.

### Readers Questions

I have been asked a few questions over the last month and here are two of the most popular starting with the Crash as Getting bog. This is a common bug and is caused by a few things but I found that when CGFs are turned off by changing the Points Per Tag in Professional Page's files, the program doesn't crash. Perhaps updating CGFs though is not a solution, so my advice is make sure a very good page document as well as a backup and then next year Amiga without updating.

The second question is about importing graphics. A number of people tell me that their ProPage won't import a picture which is surprising because when I tested the capability, the function worked fine. However, if you're giving me trouble, try holding down the Shift key when choosing Import/Graphic. This when it gets up a separator listing available graphics files. Choose the appropriate file and the image should be imported fine.







# Next Month

In CU Amiga Magazine...



**TFX: Supersonic thrills, only from CU Amiga Magazine!**



**PLUS:** Meet Suzanne, the **portable Amiga**. Find out how this once-humble A600 has been transformed into a mobile multi-media machine, complete with CD-RDM drive, flip-up LCD screen, mouse tablet and stereo speakers...

Following up this month's look at the ICS and Micronik tower Amigas, we'll be turning our attention to another 'off the peg' **tower solution**, this time from Eyeteck. Other September issue highlights include a review of HiSoft's promising new **CD writer solution** and lots, **lots more**. Don't miss it!

**October issue on sale 18th September**

# Q&A

Whatever the level of your technical problems, you can put them to our experts who will do their best to sort you out. Please remember to supply us with as much information about your systems and problems as possible, in order to help us help you.

## Logos

### Mysteries and meanings



**Solutions to those everyday troubles with your Workbench**



**If you need help getting more from your Amiga, just ask!**



**All your Internet and general online problems swiftly solved**



**Trouble making your Amiga sing? We've got the answers for it**



**Technical material beyond the scope of plug-ins and plug-ins**



**Answers to queries on particular pieces of software**



**General queries which just don't seem to fit in anywhere else**



**Specific help with CD-ROMs, editors and driver problems**



**Problems with art and design? Help and advice is at hand**



**Problems, mostly, we solve your peripheral issues for you**

## AGA upgrade



I am having an upgrade dilemma. I own an Amiga 1000 with 1Mbit chip RAM, two floppy drives, and a clock with a battery backup. The operating system is upgraded to Workbench 3.06.

As I cannot run programs that utilize the AGA chipset I am limited to a degree in the amount of software which will run on my computer—not to mention the graphical capabilities I'm missing. Upgrading my A1000 to work with AGA is an appealing option, but I'm not sure how to go about this. I can get hold of a Super Gemini chip that is a nice DAC chip for an A1000 for around £20 each, but I am not sure that these will work inside my Amiga or even if they are sufficient for the intended upgrade.

Please advise me if there are the correct chips to buy or am I looking up the wrong tree? If so, please can you help me?

James Fairless, Norfolk

Yes, but it just isn't that simple. The AGA chipset simply will not work with an A1000 motherboard, which works in a substantially different way to that of AGA machines. There is absolutely no way of retrofitting an AGA chipset.

There are however certain alternatives. There is a software AGA emulator available from the public domain, which of course doesn't give you any extra graphics modes but makes a stab at re-targeting some of the AGA graphics modes to the older chip sets. This is a long way from being a satisfactory solution, however.

A much better alternative would be to get yourself a graphics card. These will only help with software which opens up a screen that can be generated to your graphics card display. However, this means any Workbench appli-

cation has to start. It will also reduce the pressure on your Chip RAM, which is rather small by the standards of AGA machines.

## Tower help



I have found the search on the CDT Amiga tower very interesting, and will be upgrading my system in the very near future, but firstly I would like your advice on a few small points.

1. If I upgrade to a full tower with a busboard and add a Pissos M or Cybermax graphics card can I still use my Commodore 1604c monitor from the card, and will this give me a flicker free display?

2. I don't see I can cheapen PC VGA monitors instead of the more expensive multi-sync monitors?

3. I was thinking of upgrading my 20MHz 68000 to a more powerful 68040, but I noticed 68 through advertising the 68040 PPC 600c card. Is this better for handling 3D graphics etc than a 68040, and how compatible is it with already existing software?

4. I have heard that the 68040 lowest allows a Pentium processor to be connected to the Amiga via the PCI and EISA busboards. How does this interface to the Amiga, and will I need the Gemini System?

5. Does the Cybermax 3D card support a flicker free display or are they upgradeable to 4 flicker free?

6. Is it possible to use the Conquest and the Portech buffered DSI adapter along with the Datafly SCSI 2 interface?

7. I will be better off getting one of the SCSI interfaces that can be shared with an accelerator card?

8. If I added the PortPlus from

Connect will this improve the output speed of my printer?

9. Will the PortPlus help the throughput of my modem to my Amiga and what are the actual speeds given compared to the old serial ports?

Christopher Davis, Hull

Firstly OK, here goes...

1. Yes, but you won't want to. The 1604c displays only 15kHz modes and VGA resolutions. You'll need a high res monitor if you don't want to waste 90% of the power of a graphics card.

2. Yes.

3. The card requires a 68040 processor to be plugged into it.

This makes it 100% compatible. Software must be specially written to take account of the PowerPC processor.

Programs such as Imagine, Myst, and ImagePC are being converted, expect any more to follow. There seems to

be a general misunderstanding about these cards, so let us make it clear now.

For graphics such as those which require heavy processing power, the PowerPC versions are a lot faster than conventional accelerators. This is not the kind of performance difference between an 680 and a 684. PowerPC chips are a whole order faster. See CDT Amiga August '97 for more.

4. The PCI slots on the busboard are unoccupied. The Portech cards allow two computers in one case. They don't integrate the two platforms. The Gemini System solves this problem by brilliantly



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produce very natural dither patterns. It also softens edges. Experiment with sharpening and contrast enhancing filters in something like Image Studio or ImageFX before dithering.

## No DOS



I should be able to access my CUEDE using either computer system. This hasn't been the case since CD4. I'm trying to use a PC 486 with both windows 3.11 and DOS6.0, but to no avail. Please help as my wife complains about the number of unused CDs loading up.

Stephen Corio

You can use our CDs on any modern operating system. The Macintosh OS/L, Windows 95 and Windows NT all read CUEDEs fine. It's not possible for us to support MS-DOS or Windows 3.1 since it doesn't have support for long filenames. So you can use them on other platforms but not on

## Web sound



How can I configure Internet Explorer to be able to read sound files from our site? Are there any other files?

Pinella Lenti, Malta

Playing background sounds in HTML files is fairly complex. See next month's *Wired World* for details. Check us out online at <http://www.theamiga.co.uk>.

## Write to Q&A ...

You can send us any of your technical problems (or answers) to: **Q&A in CU Amiga** by the following means:

By letter to **Q&A, CU Amiga Magazine**, 30-35 Millers Road, Isle of Wight, Gosport H14 9TJ or Tech Tip at the same address. E-mail: [q-a@cu-amiga.co.uk](mailto:q-a@cu-amiga.co.uk) or [techtips@cu-amiga.co.uk](mailto:techtips@cu-amiga.co.uk). We can accept letters or text files on floppy disk.

**PLEASE DO NOT SEND SASEs**

We regret that we cannot respond to queries directly by post or via the phone, only through the pages of the magazine. We appreciate that some queries need quick answers, but we simply do not have the time to answer every query we get. SASEs are welcome in the box as please send your stamp!

## Frequently Asked Questions

The most Frequently Asked of Frequently Asked Questions. John Kennedy looks at the questions which crop up time after time.

**Q** Can I link two Amiga computers together?

**A** Yes, it's possible to link two Amiga computers together using either their serial ports or parallel ports. Using parallel ports is faster but requires a special lead to be made up. Using the serial ports instead means that a standard null modem cable can be used. The clever part is the software. Perfect for the parallel port. So far for the serial port, latest versions of these programs are freely distributable and easily available from magazine coverdiscs: PC CD-ROMs and Internet or Bulletin Board Systems.

**Q** Can I link a CD32 to an Amiga to use its CD-ROM drive?

**A** Yes, the CD32 is an Amiga first and foremost. I just happen to have that CD-ROM drive built into it. Unfortunately the CD32 doesn't have a parallel port as standard so it is necessary to use SerialPort rather than Parallel. The CD32 doesn't have a standard serial pin either so a special vehicle - using the available ports must be used. For more info on this, plus the leads and software needed contact one of the regular hardware suppliers advertised in CU Amiga.

**Q** What happens when they are linked?

**A** When you link an Amiga to another Amiga you can specify the device to be shared. This means that Amiga 1 can initiate the hard drive and floppy drive of Amiga 2. Likewise Amiga 2 can access the CD-ROM drive linked to Amiga 1. The sharing of devices extends to shared devices such as the RAM Disk. This doesn't mean the Amiga's own pool their available memory for running applications.

**Q** Is it the same as a network?

**A** Not really. A proper computer network is more complicated with sharing files and programs than allowing machines to talk to each other via floppy ports. By default the Amiga's file handling system is set up to multiuser access. Though products like Easy provide the necessary facilities.

Computer networks tend to be a

lot quicker too and rely on a standard such as Ethernet rather than parallel or serial ports. An Ethernet connection is very fast but requires extra hardware. Ethernet cards are available for Amiga's fitted with Zero slots and there are reported sightings of PCMCIA cards for A1200 units.

**Q** Could I link a PC up with an Amiga?

**A** Yes, if your Amiga has an Ethernet card you can connect them in this way and run a common protocol such as TCP/IP and Samba for networking file handling. Samba completely! Great! It is a lot simpler to connect the machines via their serial ports using a null modem cable and run a terminal emulation program on each or else you can run a program such as Term Express. Alternatively World Science are selling PC Networks which does the same kind of thing via the parallel port. These solutions are ideal for situations where you want to swap data between the PC and Amiga but wouldn't be bothered using a PC format floppy disk and CrossDOS.

**Q** Can I run PC programs on an Amiga?

**A** Yes, because it is possible to run software-based that it is no surprise that we support a number of. However they run quite slowly by their very nature so you won't be able to run state-of-the-art games or big applications (such as Windows). They can run older DOS applications (though and some very old games). Don't assume that as your Amiga has a CD-ROM drive it can run all PC CD-ROM software. CD-ROM is only a form of media. Not a floppy disk.

**Q** Can I run Amiga programs on a PC?

**A** Yes, there is an Amiga emulator for the PC called UAE. It is fairly available but again don't expect miracles. It's best Pentium based PC's expect performance close to that of an unemulated A1200. Emulating faster Amiga's then require faster Pentiums, such as P166 models and upwards.

**Q** I have an accelerator card and a hard drive. But do I need a new PSU?

**A** It depends on power consumption also. If your Amiga works it's fine and your PSU can't make any more noise is really then it's probably fine. If there is a unique red problem or your Amiga only runs reliably with either the accelerator or hard drive it's likely the PSU is being asked for too much power.

**Q** My computer crashes often?

**A** If it always crashes when you do the same thing from within an application it could be a bug in the software. If it crashes randomly even when you aren't loading it, maybe it's a hardware problem. Try checking all plugs and sockets and fitted properly (especially the power supply plug into the back of the Amiga) and that all expansion cards are seated in it as they will go. If necessary remove expansion cards (clean the contacts in the busbar and re-seat them). If you have a heavily expanded system it could be too hot.

**Q** When I install my Amiga on the hard drive is it faster?

**A** It won't write to the disk or delete anything from it.

**A** The hard drive is sold. For some reason the disk stayed in it is corrupted. The Amiga test it and tries to fix the damage. While it is doing this it locks the drive, especially - so you can't write to it. Delete files is attempt anything else which would make matters worse. Leave it alone and it should fix itself after ten to twenty more uses. If the problem continues and you aren't doing anything else like switching it off while it is trying to fix, then could be a hardware problem. The disk could be failing, try re-formatting it or it may be the power supply. Go visit a friend.

**Q** My Amiga is to be linked up to the Net. Some email messages come in about the loss of those virus, or Pseudo virus. Will these affect me as I am not using a PC?

**A** Most talk of these messages are hoaxes. Simply ignore any kind of their message.



# Backchat

**Make yourself heard. Send your views and opinions to Backchat, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ, UK. Or E-mail to [backchat@cu-amiga.co.uk](mailto:backchat@cu-amiga.co.uk)**

## Silver service

This is the first time I've written to a magazine and my reason for putting pen to paper is so I can share my delight with someone.

On the odd occasion I have ordered as no doubt it must have, with the usual wait time outside of the retail trade (for example having to wait for six weeks for an item of no more to be delivered). On the other side of the coin there are those people to whom you have to say thank you for a job that's well done - I think of Skyline & Vulture as such people.

On three separate occasions I have telephoned the company for their advice and on each occasion I have received much encouragement and excellent advice. Their service is outstanding in that today I have ordered from them and have both been received the goods the following day. I must congratulate the postal service also for their part in the remarkable service. A big thanks to all of you at CU Amiga. Keep up the good work.

**Thomas Timothy Cornwall**

**Well done Eyeball. On other plac**

It seems it's not uncommon to be charged for an expensive courier - with no photos, and the goods are dispatched several days later.

## Taken for a ride

A word of caution to all Amiga users. Don't be lured into paying too much for hardware from Amiga shops. They are taking us all for a ride. Sure, we need them for certain supplies we do use Amiga specific such as accelerators and monitors but what about the truly hard drive printers, CD-ROMs etc. These are all industry standard and can be bought at cheap from PC companies who sell them at places such as Future Mart. I have recently purchased a 2.5GB hard drive for £158! That's almost 180 cheaper than you will find in the magazine. Stop paying over the odds when buying your hardware and stop driving the drive, **Glenroy**

Amiga dealers that have been prepared to stock around through these hard times.

## Top Net tips

Following your July 87 issue I'm now saving money for a modem etc and will write in future by email. In the meantime here is a piece of info that might persuade a few others to get connected.

The wonder of cable TV has just arrived in my neck of the woods and most of the channels are shared, which, but the cable company Videotron will also run your telephone line for you. Apart from cheaper long distance and all charges local calls between Videotron customers are free of charge after 10pm weekdays and all weekend. If your ISP is connected to their telephone network it means you can surf the Net free of charge during those times. The best part is that you don't even need to have cable TV as you can rent the phone line only. Therefore you only have to pay your monthly fee to the ISP.

Currently in Southampton, Hampshire, Calsonic and BOP are registered with Videotron. I've sent you to Videotron Amiga Network asking them to put pointers up the potential to increase the user base. The more readers who write the more likely they are to do it. See you at the Net.

If anyone wants details of cable TV write to: Videotron Corporation Ltd Videotron House 76, Havant Road, Havant, Wokingham RG26 2AG or Telephone 0345 394 1717. **Charles Pease, Havant**

**Good tip Charlie.** The catch you might find is that once the clock has past 10pm, companies with Net access pumps money and the retail side (especially shops voluntarily) on the lines and the ISPs get congested. There's also the possibility of certain ISPs limiting each user to a certain amount of hours online at any one session to ease the load.

## Why don't you...



...the way back to the roots of CU Amiga for a few years and let the whole have. Passed the magazine to be a excellent value for money it was also pleased when you decided to mount CDs on the disk. However I feel that although you have taken some steps to encourage you readers to upgrade to CD first with a little more encouragement more would follow.

You constantly mount several our programs in order to promote your magazine. Why not negotiate with some software programmers and get fully registered versions of the CD-ROM drive software on your disk.

Could you also consider naming some CD as best or getting some of the CD as there are many of

them and you can also consider using PC readers using PC keyboards etc in the magazine. Keep up the good work. As there is only CU Amiga and Amiga format available now the Amiga community really do the support it can get. **Jim Pines, Llanelli**

**Penny you should mention the DV issue.** We were thinking exactly the same thing during the 10-11 Project 85 and said we've got it this very issue. We'll be developing the DV series through the following months too, so we know you're ahead more than just recycled features and interjections there. In fact, next week we'll be taking a look at 'Suzanne', the complete Amiga-based Amiga that we had the privilege of the World of Amiga show. We won't let you down!

It's true that many Amiga compatible programs are available cheaper from PC retailers. The main

reason for this is that the PC companies are selling to a far bigger customer base than Amiga dealers, and so are able to reduce the profit margins on their products. They can do this because they simply sell much more gear. The problem with buying from PC dealers is that you'll get no Amiga-specific support. For example, if you buy a hard drive from an Amiga dealer it will often come pre-installed with Microdrive and a selection of useful software tools. If you bought the same drive from a PC dealer you wouldn't even get any software to go with the drive. Similar stories could be told of CD-ROM printers and so on.

While Amiga dealers may charge more for certain items, this does not amount to a rip off. Take a look at the cost of the Amiga series and compare it to the PC market, or even the Amiga scene in the early 80s. We should support the

of snafu up. However, you might find that none of these problems crop up in your case, in which case you've got yourself a great deal.

## User friendliness

I have owned an Amiga for about six years, and bought the first one because I wanted to have a computer as games machines that would plug in and just work. The Amig found the b to it: it's not too tricky to use, so some on something called DOS, so find to buy a software package to gain the usability of the windows, etc., etc., and no need to worry about whether the machine would be ready for the museum after a year. I now own an Amiga 1200 and have never got past to learn any AmigaDOS. The Workbench in my machine must be dying off beyond through lack of use (apart from the initial 'hello' screen where I can't). The only skill that had to be learnt was how to push buttons on the keyboard, and use the mouse (kind like a hand).

Many weeks will most likely pass by my Amiga and say that I'm not using the Amiga as it should be. The last time I got out of PC mania (I'm now back to work on that) and surely this has always been the Amig's strength. It is like to exist the world of AmigaDOS and Workbench and the wonders that can be done by the performed with that use. But to me the whole strength of the Amig is the core plain lack of knowledge needed to run one. Learning more does matter the pleasure that it's the hardware of the Amig and the highly efficient use of memory that

has finally led to this point.

The Amig is a change in the future because it is changing the future. Games has brought it, and from the way they are taking over to use the above mentioned points to design a machine to knock the PC off its self built pedestal. The way has been long and no have to be more up and down, but change your glasses and you will see a new world. See the PC. Long live the Amiga! David Lambert, Scotland

Here here! There's still yet to be an operating system that handles user friendliness and outstanding performance in the same bundle. But there's been an operating system maintenance for a number of years. How long will it be before an updated AmigaOS on an updated Amiga begins to seriously show up the mainstream platform?

## Man of man

What's reading The Man on Channel 4's failed. I called it a success, a very well called. Not too much which was so cutting a subject on this machine. I believe I started off seeing you should be happy with the machine you own, and to stop slugging off other people. I was extremely happy with the article as it tied up with PC news at school saying I should get a PC and that the Amig is cheap, but I don't see why I should pay an extra grand as I can do all of the things I can do on my Amiga. The last line stated: 'Feel free to keep slugging off the Amiga however'.

At the point I immediately felt like getting the Pal that made the page and making a large laptop OK, we



▲ It's by a combination of the flat, so you can see a browser while you're still.

get the idea - I'll. I then said and what the same person had said at the beginning of the article - about not slugging off other people's machines. Is that just 100% some or what? I don't think the person quite knows how many people still use the Amig, and regard it as their best machine. If the design like the Amig, to should need it to learn! I have to use a PC most days of school and I don't complain even when I close keep saying About Pal. Pal. Have about I throw you out the goddamn window!

Oh, I almost forgot to mention you might be a good your cover up is wonderful, you free data are really cool, and finally LAMP-Good suits the world!

Steve Peters (England)

New-age Dave, don't let other people's email addresses get to you. Anyway, why should we with any notion of someone performing to know about someone's computer who still heavily through a 486-2X Spectrum standard machine?

## Millionaire Amiga

I am not a millionaire, I have already looked up and reported this, but due to the fact I'm writing on the National Lottery website at the shop where I work, the two books down, and a copy of the book to be called in the end looking at the machine. I have been informed that the shop was in fact those of an Amig computer, how many from which would, so even if I was pulling my leg, I don't know, but I'm sure you and a few readers would like to know the technology is being used in the safe and secure hands of the

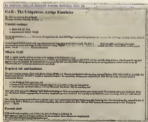
Camelot Organisation.

We have been reported on the National Lottery website being based on Amiga because we don't know for a fact that they are. However, given today's computer's involvement in creating small 'Word' Amiga systems and have added to what, development the Amig is, it would be a surprise. If anyone has proof of this we'll appreciate if they could drop us a line and we'll pass it on.

## Regrets

A friend of mine used to own an A1200 with an extra hard drive. I was pretty boring and was into buying a PC for £1500. That was one year ago and now he is seriously regretting his choice. He was made to get for £250 he could have bought a CD-ROM hard drive, an accelerator and extra RAM. He also said that much of the good PC software may be converted to the Amig. Not only that, but new software is being made for the Amig which make great PC software. Games like Forgotten Forest and Foundation make Command and Conquer seem like a child's game. My friend is now desperately searching the Net in the hope that he might find an Amiga emulator so that he can play Amiga games on his PC. You wouldn't imagine to know when he could get his hands on one would you? It should be great for watching him rush to PC and thinking it's an Amig.

I recently spent my spare time going around town with the wife, so that I have been truly right now by slugging with my Amiga! Steve Pandy, Suffolk



▲ Nothing to do with the Roldec Shop software, this Amig is a new machine for the PC.

There's an Amiga emulator for the PC called UAE. Type UAE into a web search engine. It's so simple as that.

## Net security

I've just had my first month's bill on the net and WOW! and it is brilliant. Caron were able to help sort out my initial problems and it was great to have a provider who knew about 'Old' Mips and the Am-gal.

A lot of the web sites I've visited ask for credit card payment before you can be downloaded but I'm very wary about disclosing my credit card details. Have you any information on how secure this system is? Also what are the experiences of your readers? And does the so-called American Virgin Spring work? Have you any recommendations for me?

proceeding large down as it

We are very glad that more Internet Service Providers are supporting the Amiga. Caron in particular has two advantages for Amiga support: either clients to support clients and clients to support clients, both ways, both available to users of other ISPs also.

As for security and transactions on the web, the important factor is to use a web browser that supports SSL. Currently Vynova-PC has the best SSL support although Microsoft supports Microsoft SSL.

If you are using an Mips A1 site and the services behind you like a computer, is active, you can insure that only the company you are purchasing goods from will have your credit card details. Of course you should make sure the company is reputable, as it's all the more easy to get burnt as the Net were though there are plenty of reputable traders.

As for American electronic cash style schemes, First Virtual at <http://www.firstv.com> has increased support in the US. If we've got a credit card it only costs about \$5 (your bank does the conversion) to sign up, and it's totally safe since you have to approve all transactions by replying to an Email from First Virtual. Microsoft and Vynovans can be purchased via First Virtual for example.

## Sir Clive's cock-up

Come on CU. Surely some of you are old enough to remember what a Sinclair C001 and a Sinclair Spectrum look like? I never of course

to page 28 of the July edition of CU where you dropped an outright blunder of referring to a picture of a Sinclair Spectrum and calling it Uncle Clive's C001! Shame on you. Let it not happen again! **Adrian Jones**

Yes, well done. For the record, we are all well aware of the differences between Sir Clive's C001 and the Spectrum (and indeed the good old C000). We're not sure how that slipped through, especially as we had an ex-Sinclair User Group in charge of that sort of thing. **Winopal**

## Not slavishly addicted

While typing out a few problems with a friend's Amiga 600 I had cause to buy an Amiga magazine. It has been some time since I last had a reason to read an Amiga mag and I was excited to read the same old comments against the PC for Chris Oswald's Amiga June 93. "Being more stupid and getting a PC just because there is a lot of software available for it."

I take issue with the term "stupid" in regard the PC route after seven years with the Amiga. It was a logical decision based on where the Amiga was going in the hands of Easom or Vynova. I made my PC with my previous knowledge of building a computer and found it extremely easy.

When you go along to play "Tomb Raider or Settlers II or Castles or any one of a number of a few games on your Amiga? When are you going to have such a wealth of educational titles for your child to use? So the Amiga can count your processing and 3D/magazine at two of its strengths. Big deal. As for Windows vs. Workbench, I can honestly say that I have no preference. For me they both solved the job. I would not have been on the Net if it wasn't for the ease with which the PC made it easy. I thought that things may have changed for Amiga owners now a year or two ago things seemed a lot harder!

It is funny to hear you don't get PC mags stopping off the Amiga. I probably better informed and more tolerant than their Amiga counterparts. As a way of ending let me tell you that it will not be the sales of my new Amiga that will make it a success but the

my 6.25 Spectrum, and a C001 and of course, you are labeled in the last issue. Shame on it!



amount (not quality) of software for it. If a new Amiga should appear then I will give a consideration as a replacement for the machine, that I now use but only if there are obvious advantages. It is long as I am not slavishly addicted to any computer by the point of total ruin. **Mike Fraser via Redwood**

You don't get PC mags stopping off the Amiga? Why have your rank as a reader's letter and not CU Amiga itself? You want find on "stopping off" the PC unless it's an up-to-date justification point. In contrast, do you have no problem building a PC, or readers had no problem building a new one up. Amiga system based on our materials. The worst case that in a PC magazine. No you'd had released press releases, unfocused instead reviews of everything products and a CD full of hopelessly crippled sales software. You won't be finding the wealth of high quality technical coverage that you requested to mention in the June issue of CU Amiga that you purchased. As for being better informed, get better and better are those words that spring to mind. It you think the Amiga's applications are limited to word processing and 3D rendering. You cannot even tell how much basic, not is sufficient and even friends Workbench let. As for that software, then perhaps you should like to check out the Amiga. What the Amiga looks in mainstream games and applications, it more than makes up for in the rich variety of very high quality free software. Our first recommendation is that you read that issue of CU Amiga - you just might learn something valuable

# To the Point...

Our announcement of the forthcoming TFR on the October 93 CU issue of CU Amiga triggered a chain of glowing comments as usual so it was posted on the Internet...

Well done for getting TFR in on time the best mag, and the kind of thing will keep your head on-line. Keep it up! **Richard Brown**

Wow! what a scoop for you guys. I'm all excited for you. Next to the front of the Amiga, you have to be the cream on the cake for all Amiga press worldwide. **David O'Neill**

I read with great pride that Emily TFR is going to be for available for the Amiga or your October issue of CU. **Ed via Wales**

I'm pleased to see TFR is taking the light of day. You don't realise how grateful the rest of the Amiga users are. To date the best flight sim I've played is Simula by Dig Ltd Integration. I've found no other flight sim to come close apart from Digital Integration's F-16 Combat Pilot. I'd just like to say thanks to the CU team for making a dream of mine come true. The best waiting over the years is now finally through. **Ronan**

I find that this is probably not good evidence but I could not resistably at CU. What is obviously too thing to do. I'm about up the minutes and it comes out. Again well done. **Nicola McNeill**

I have an Amiga without a CD-ROM drive, but a PC with one. Can the game be transferred onto floppy disks and then re-assembled on the Amiga's hard disk? **Mike**

Yes, it could be done. You'll need to archive some of the files to PC then on a 70MB PC formatted disk. Mike says that you have a hard on your Amiga with which to upgrade the archives. As another alternative you could use a PC Amiga link such as Control or Network PC.

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# Points of View

CU Amiga jumps back on the soap box to give you another injection of Amiga related rants and reveals!



At last... a cheap DSP equipped sound card



by Tony Morgan

So the Amiga gets a decent stereo DSP-equipped sound card at last in the shape of CU Amiga's Project XG. Just this value is true!

There have been a few qualities that it is not strictly a sound

card on the PC soundblaster basis. For enough, it doesn't sample any sounds itself and you can't use it to do digital sort own sample-based music. But you only need to take a look at what it does offer. (Don't call it then what it has to offer you the video demo tracks on this month's CD32 edition. You'll be played clean only.)

While Project XG isn't a seamless audio replacement for your existing 401 (Pulse) sound, for anything other than sampling this is stunning. Not to mention extremely good value for money. What's more, it works with absolutely any Amiga, regardless of its speed/clocks.

Importantly, however, it's not a drop-in sound upgrade that's going to work with all your software. But, better yet, it's not going to happen. The closest you'll come to that is the A4140-compatible audio interface and a 16-bit sound card

**"Project XG is perfect for musicians on a tight budget. There's no need for a mixer, you get an effects unit built in - you don't even need a MIDI interface!"**

such as Tascam or Datlab, but even then your software must have full support. These cards are only available in some small format anyway, which rules out anyone not using a big-top or laptop configuration.

Project XG is perfect for musicians on a tight budget. There's no need for a mixer, you get an effects unit built in, and you don't even need a MIDI interface. The widespread use of the General MIDI and MIDI-to-Amiga interface means MIDI and XG modes are now popular across all computer formats. So even if you just want to listen to other people's music, there's no shortage of material out there. I hope you find a useful, whatever you want to do

with your Amiga. This is just the first project in our new CD32 series designed to satisfy those who are prepared to customise their machines in order to do exactly what they want.

Of all computer users, Amiga fans are undoubtedly the most individual, and it only follows that the Amiga crowd should set their own agenda, and not simply follow the rules dictated to them by others. Perhaps the old adage that you know what they say - if you want a job done properly, you've got to do it yourself!

■ Tony Morgan is CU Amiga Magazine's Editor

Stronger marketing is the way forward

by Philip Bailey

I'm sure every Amiga user has encountered those nasty little adverts you find every day in the current magazines saying things like "Top of the range Pentium - why don't you test?" That's all I need! First thing in the morning to put me off my breakfast that you've managed to do. Then, they've all done extremely well in marketing for should I say buying the products.

They've done well by making me into thinking you need to have a high-powered P200 in order to get the best out of simple applications such as word

processing and spreadsheets. I've never met one poorly-educated and stupid who was convinced it wasn't possible to access the internet without a PC running Windows 95. How really outdated he was!

I had to mention one advertising campaign that really left a mark in my mind. I would be Windows 95. No one can have failed to notice that famous man looking and those glasses - that almost every non-Amiga owning person was doing to get their hands on. Then came along processor giant Intel, with their amazing Intel Inside man, who also got inside not only of minds. Although Amiga users may

see these campaigns as an attempt to get the best brands they do work very well. What is the Amiga tried to do when featuring a mind professor playing on his brand new CD32 many years ago? Virtually nothing! He wouldn't the Amiga started to fade. In the past 2 yrs.

Amiga games were pushed off the shelves by PC CD-ROMs, and the A1200s were overshadowed by lower PCs. But now with levels of never before more powerful PPC Amiga on the horizon, will the Amiga ever get back to the top? It certainly won't if it's just accepted quietly by the cool Amiga users.

This time around, Amiga international and many other companies must get a lot more effort into advertising - and not just in the Amiga press! Promoting games developers such as clockwork and Vector should also take note of a few

it'll be a hard work of some point, and starting these ideas seems to be a platform for the general public think is hard.

Hopefully in the near future we'll see a brand new advert for this our screens, and for the first time at ages. I'll be able to tell my boss of your ideas with a smile!

■ Philip Bailey recently did 2 weeks work supported at CU Amiga



At last, a better guess that the Amiga made, but still it has the advertising!

**"What has the Amiga had since that advert featuring a mad professor playing on his brand new CD32 many years ago? Virtually nothing!"**

## Amiga International won't commit to PowerPC



### by Matt Tortorella

It will take us some of you to know that the great debate on the future Amiga CPU will go on! At the time of going to print, Amiga International refused to be committed to the IBM/Motorola PowerPC though they did at least hint at what likely their previous reps, Amiga Technologies Inc., considered to be the "PowerPC of" choice. Someone ordered a refresh. Others are now profiting the

supremacy of computing power: the DEC Alpha range of CPUs, as the only the Amiga should go. The fact that the chip is the fastest on the block seems to be the overriding factor in the overall debate about its use. I certainly wouldn't look at Alpha-based Amiga in the left but I don't follow it as a real or a option though for a variety of reasons.

Firstly cost. While Alpha machines have dropped to around the higher end PC price range, the chips and the architecture to support them are very expensive for a low-end, hopefully good value future Amiga. The power to prove that it is a real or a good as the PowerPC and the lower end of the market is not adequately represented by the Alpha relative the PowerPC 603e is just the start.

Next the Motorola and Apple. Under PowerPC real world 100% native PowerPC code can be run while still running AmigaOS. How is this to be 100% native? Alpha code unless you want to run Windows NT and I don't believe any of us do. Imagine, Gemini 40.

**"I certainly wouldn't hitch an Alpha based Amiga in the teeth but I don't think it's a realistic option though, for a variety of reasons."**

Personal PC etc. being pointed to Alpha? No. Being pointed to PowerPC? Yes. Is there an Alpha code C compiler for Amiga? No. PowerPC? Yes. I think you're beginning to get the picture.

Phase 2 has been built and shipped to developers the only low-end CPU to be used with the Amiga relative. Shortly with a call out to the public the PowerPC project has a significant milestone and on the stage of any other CPU is only going to serve to fragment the market. Significant good work has already been done in porting key parts of the operating system to PowerPC. Amiga International would be insane not to pursue it. But PowerPC part of the operating system with the present base.

Criticism of the PowerPC range revolves around claims that demand and production is suspect with an

asking Apple. May I point out that as PowerPC sales continue to rise, there are three manufacturers of PowerPC chips (SGS-Thomson, Motorola and IBM) and the technology is present in a whole range of embedded microcontrollers not only at Motorola's core business. As for acceptable levels of CPU performance, checks out the typical performance figures and long term plans for the 603 PowerPC series—and beyond. Intel CPU acceptance for the Macintosh and POS has plans in 1994 same area (Envision 4 x 300MHz PPC604e) (only cost).

Get with the plan. PowerPC is here on Amiga and I should be available in the market.

■ **Matt Tortorella is CEO Amiga International's Technical Officer**

## The price of performance

### by Paul Hales

Finally lets go back in time a year or two. PowerPC is a good choice for the CPU of a next generation Amiga. It has multiple sources, it has a single future, and there is a well-proven single team cheap time and chips to powerful local bottlenecks. Apple's use of PowerPC increases cost availability and will use sales of the chips, which can only be a good thing.

Motorola obviously go was back with the Amiga, and appear willing to help one way they can to get the Amiga to PowerPC. Digital's best Alpha chip is the fastest in its class, but boy you'll have to pay for that performance.

Now let's fast forward to the present day. PowerPC really is proven and attractive. The much needed Expertise at PowerPC 60307/603e—and there are us up the expensive chip! By the time you read this, the reduced cost version of the Alpha 21164A will be out.

Alpha's fastest processor—say they may well not be around in a year or two, which would have a devastating effect on the PowerPC market.

So, if PowerPC as I looking at alternative as it was two years ago (or) it is possible to consider the alternative? Well lets if any work has been done to port the Amiga's OS. Amiga International would effectively be the starting line again.

Digital's Alpha chip runs the fastest around, and now reaches 600MHz. The next generation Alpha chip, the 21264 looks set to show Digital to not only keep a hold on the performance lead, but to extend it dramatically.

It is true, you can currently get an Alpha based workstation cheaper than the last price of the Amiga 60007/603e—and there are us up the expensive chip! By the time you read this, the reduced cost version of the Alpha 21164A will be out.

With their price a genuine's choice is that the Pentium or Pentium II. With that price/performance ratio and obviously Digital's 60307 series use technology, allowing them to run Intel Windows, app software at high speed, you can expect to see the Alpha II's, Alpha 21164A chip.

But to be honest whatever chip Amiga International chooses to port Amiga OS to—if indeed they are willing and able to do it, early then it might mean.

The work done at porting the OS to one chip means that porting to another chip would be a lot simpler in comparison.

Software developers would have the hardest time, needing to port complete code to have another box on their desk. I've become more than just a little biased with PowerPC. But PowerPC first, and would like to thank Amiga for letting me explore that there's much more to

high performance computing than just PowerPC.

It doesn't seem like I'm enough—and having the fastest general computer around sounds attractive to you—then check out the Software System Web site at:

<http://www.ssws.co.uk> for details of HIG's Project Alpha.

■ **Paul Hales is the programmer responsible for Pentium and the Europa System software**



■ The Alpha based workstation is cheaper than the last price of the Amiga 6000/603e

**"The next generation Alpha chip, the 21264 looks set to allow Digital to not only keep a hold on their performance lead, but to extend it dramatically."**





